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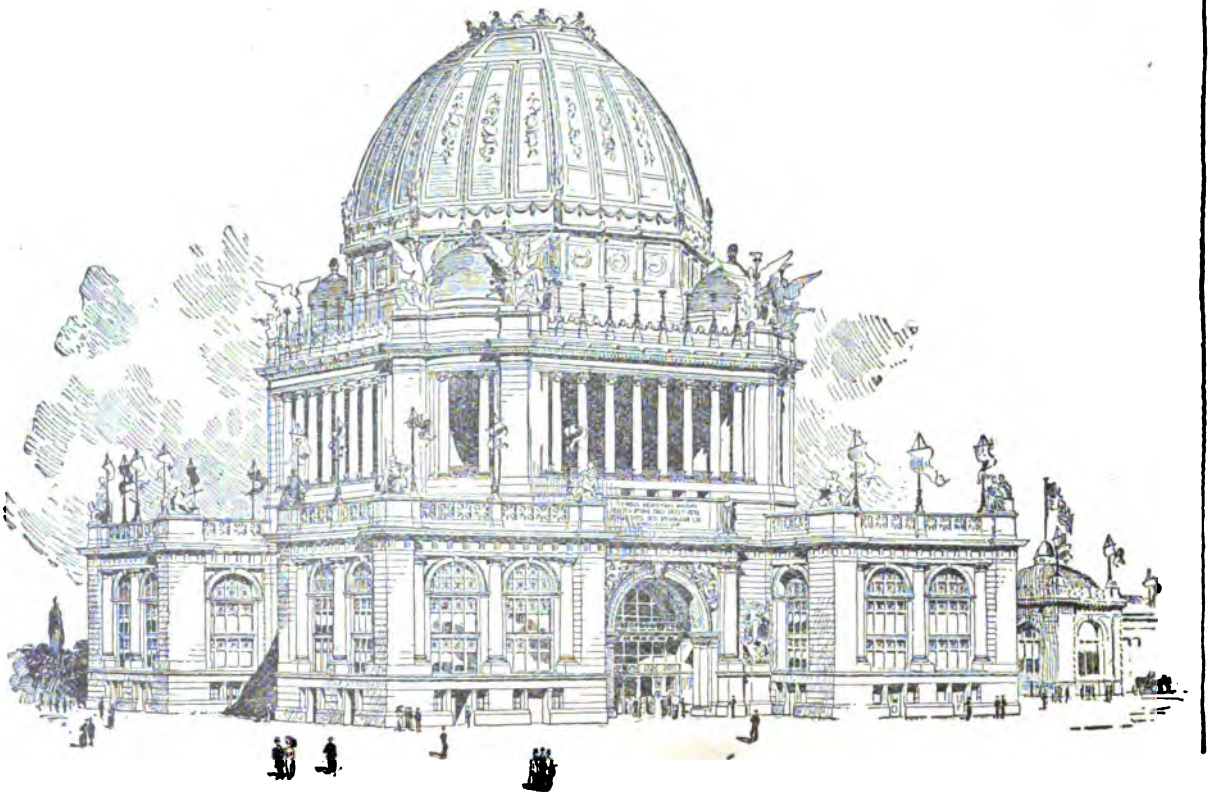
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CURRENT EDUCATIONAL THOUGHT.

I BELIEVE, therefore, that our schools should have a patriotic ritual, impressively conducted and rigidly maintained. Every class in this Department should be provided with an American flag, to be placed, as an honor and a privilege, in the custody of the pupil having the best record in scholarship and deportment. Each day, upon the opening of school, the flag should be unfurled and ceremoniously saluted, followed by short patriotic selections by the teacher or scholars, and closing with "America," the pupils invariably standing during these exercises. Whenever, on other occasions, it may be desirable to sing our national hymn, the flag should be first unfurled and saluted. With the advancement of the pupils from grade to grade, there should be a corresponding broadening and deepening of patriotic instruction. Thus, the primary idea of the State in educating the growing generation will be fulfilled—the formation of character and the making of good citizens.—F. A. HYDE, President S. F. Board of Education.

THE most noisy of our flag patriots, who are extolling the flag upon every occasion, and pronouncing this the best government which the sun ever shone upon, are, in many cases, the most corrupt of the villainous gang that are, and have been for years, debauching the ballot-box, the palladium of the liberties of a free people. Let the schools teach a patriotism that insists upon uprightness of conduct in every walk of life. He is the best patriot who is the best citizen.—*Ill. School Journal.*

EACH child has an individuality of its own. It is a sacred power intended to grow forever. It is the Divine in the child. It cannot be

marred or misdirected without interfering with God's plan. I have no right to make a pupil like myself. He is God's child, not mine. I should help to make him his true self, not a reproduction of me. One of most of us is enough.—INSPECTOR J. L. HUGHES, Toronto.

THE problem set for the teacher to work out is this: *How to make use of the animal or mere nature-activity of the child to stimulate and direct the growth of its self-activity.* It is necessary, therefore, that he distinguish between these two kinds of activity. The one needs no cultivation. It is his *sole function* to cultivate the other.—GEO. P. BROWN in *Ill. Journal.*

THERE is now a tendency to regard art schools as properly adjuncts of a university, and several of the strongest universities have affiliated or incorporated such departments. No one can say exactly where the list ends of special schools that may properly be associated with a university; but nothing marks low standards more surely than a large and various fringe of outlying departments. Probably the rule instinctively observed by the best universities is that—now technical education is definitively accepted as university work—any professional training that involves serious and continued study, and rests on a basis of theoretic knowledge, may be given by a university.—MILLICENT SHINN in December *Overland.*

I WOULD have the age for admission to the public schools lowered to five years. My thought is not only for the young of the cities, but for the solitary little ones who sit by countless country doorsteps while their elder brothers and sisters are at school.—Hon. JOHN SWETT in California Convention of Superintendents.

Columbus.

Through many camps and courts Columbus fared,
To many ports and strange his ships' prows turned,
While in his heart, increased with age, there burned
The wish to dare and do what none had dared—
To save the heathen by strange gods ensnared,
In ancient Ophir, rich in gems and gold,
Or from the sea's heart wrest her secrets old—
These were the things for which alone he cared.
In an auspicious time he came to Spain;
The Queen—the Jews cast out, the Moors o'erthrown—
Most gracious was, and made his cause her own;
In her good ships he plowed the watery plain,
Found a new world— his quest not all in vain—
And there reared Freedom her enduring throne.—C. W. C.

GENERAL DEPARTMENT

German Schools.

EMMA M. GARRETSON, BENICIA, CAL.

I have a humiliating confession to make. When I went to Germany, it was for an entire rest; I did not intend to visit schools; but while in Brunswick, I had the good fortune to board in the same family with an Ober Lehrer in the gymnasium. He was extremely kind about explaining the workings of their school, and interested me so, that I finally declared my intention of visiting it. The man wore his hair á la Pompadour, but this resolve caused it to stand more on end than ever. "Impossible!" he exclaimed; "our director would not allow it. A woman enter the school? Never!" He said so much that I saw the thing was impossible, but inwardly vowed that I would manage to go in Berlin.

"Brunswick," I said to myself, "is an old city, and probably conservative, but a modern city like Berlin holds surely broader views."

I had a letter of introduction to a director in Dresden, but was warned that it would not prove an "open sesame" to the closed doors. As I did not wish to fail again, I did not present my letter, but waited until my return to Berlin. One morning I started for a certain gymnasium which shall be nameless, as I was assured by my German friends that its director bears the reputation of being the sternest in the city. Contrary to their prophecies, he received me most courteously, and was ready to give any information; but when I suggested entering the class-rooms, that was a different matter. He was very sorry, but he could not permit it. "Why not?" I queried. "I could not control my boys if a woman were to come in." I said that I was principal of a school where there are two hundred and fifty boys; but he looked as if I were a curiosity, and said: "If you get a letter of introduction from the Cultus Ministerium, I will gladly show you the entire building." Delighted at this concession, I went home highly elated; but how to get the coveted card?

Suddenly I bethought myself of a letter of introduction to Minister Phelps, which had been given me by a cousin in New York. He seemed pleased to see me, and regretted that Mrs. Phelps was away, and there would be no receptions at the Legation during the rest of the time I was to be in Berlin. Then he asked what he could do for me. I explained my errand. He said that his first secretary, Mr. Coleman, attended to all that kind of business, and he would speak to him.

Mr. Coleman, upon being interviewed, said: "Oh, there will be no trouble about it at all. I have obtained at least five hundred permits in the last ten years. It will, however, take ten days; for it will have to go through the Foreign Office. At the end of that time you can have the letter."

DISAPPOINTMENT.

I spent the following ten days in imagining the look of surprise that would overspread Director ———'s face when I should appear again, armed with my introduction. Alas, for human hopes! I received, at the stated time, an official-looking document: "The laws governing the education of males in Germany do not permit the visits of females."

I did not visit the gymnasium.

"All schools, whether public or private, are under the direct supervision of the government." As the bright author of a little book entitled, "Life Among the Germans" expresses it: "The state supposes itself responsible to see that the education given to all classes be wholesome and solid, and to ward off the perils of having its young incompletely or inefficiently instructed. That is to say, the education of the country is taken, like the post-office and railways, into the hands of the state. It will guarantee to the country that no man unqualified shall physic their bodies or educate their minds; it supervises the butcher-shops, that no diseased meat shall be sold; and the schools, that no unwholesome teaching shall be imparted. The nation, collectively and individually, is strained to get the utmost knowledge."

Indeed, this anxiety for self-improvement stands much in the way of foreigners who go to Germany to acquire the language. Every one has some knowledge of English, and they strive, in every way, to increase this. When I first went to Berlin, I painfully and laboriously concocted sentences in more or less, generally less, elegant German, before entering a shop to buy. Invariably, I was subjected to the mortification of having the shopkeeper answer in tolerably correct English. A young American girl told me that she had been sent to a

German boarding-school for some time, but left without having learned much, owing to the fact that the German girls would insist upon talking English with her—a lesson in perseverance which illustrates a well-known trait in their character rather than any point in their system of education.

The school system differs in one great respect from our own, the natural outcome of an aristocratic form of government, and exemplifying in itself the difference between republican and monarchial institutions. Here, theoretically, we are of one social grade; and one and all, rich and poor, receive the same instruction; while there, at the outset, are two classes of common schools: the Bezirkschule, frequented by the poorest, and the Bürgerschule. The only difference is that, in the Bürgerschule, one foreign language—French, is taught.

LEARNING FROM AMERICA.

In cities there is yet another class of school for girls, the Höhere Töchterschule. For boys, there are three kinds of higher schools: Real Schule, Real Gymnasium and Gymnasium. These, besides the Polytechnic and Normal Schools. As we shall not have time to speak of the Polytechnic Schools, I will mention here one fact with regard to them. It is said that a certain Herr Director was requested to visit the Centennial at Philadelphia in order to get fresh ideas, if possible, from the American schools. He pooh-poohed the idea; but the government was in earnest, and he had to come. Not long after his arrival, he sent for assistants to help him with his notes, and when he returned home, he informed the officials that the Americans were far ahead; that they themselves had nothing worthy the name of Polytechnic schools. The officials were highly indignant; the director who had been so unwilling to go, had come back rather too enthusiastic; they had not expected him to go so far. However, school positions there are not like positions here, dependent upon a single school board; they are for life, and the teacher insisted upon using the American method. The board reluctantly consented; the school was reorganized; and now, it is claimed, their schools excel ours.

In the Volksschulen, which include the Bezirkschulen and the Bürgerschulen, the course of instruction covers eight years, and includes Religion, Language, Reading, Writing, Arithmetic, History, Geography, Object Lessons, Natural History, Geometry, Physics, Drawing, Singing, Gymnastics, and Sewing for the girls.

THE AIM.

The aim of all German education is to teach the child to think, to reason for himself. "Even the examinations are conducted with a view of ascertaining the intelligence and ability of the applicant; not to find out how many pages of history he has crammed or how many examples in arithmetic he remembers. That the schools accomplish what they aim to do is easily proved by conversation with almost any German; they are a nation of philosophers. How is this accomplished?

First, the perceptive faculties are awakened; second, observation; third, thought; and then naturally language is developed." A good illustration of their method is shown in their picture lessons. A picture is shown; stories told from it; bits of poetry bearing upon the same subject are taught; and, finally, a little song in the same connection is sung. This I saw done with little tots in the first year of a Bürgerschule in Dresden—girls six years of age. Lessons of the same kind are given on the four seasons as they occur. In the next grade, the observation lessons are upon the various fruits. In these lessons, there is a book prepared for the teacher's use, giving questions, answers, and verses. This was seen on my first visit to a German school, and I noticed an entire absence of school-room decoration—no pictures about the wall—nothing of that which, recently, we have been told in educational journals is so necessary to instil a love for the beautiful in the growing child. This same lack I noticed in other rooms, and at last I spoke to the teacher upon the subject. She told me that they do not believe in having anything in the room that will distract the child's attention—concentration is what they try to secure, and what the child surely does acquire. Large pictures are brought in whenever necessary in the school work.

Another point that I noticed was that, under the desks and chairs, there is a platform raised some six inches above the floor, in order that the children's feet may be kept warmer. Still another idea is that the light comes from the left side of the room.

The pupils in this same grade wrote remarkably well; they had been in school about four months, and their books were marvels of neatness. They commence immediately with pen and ink and write in blank books, the teacher putting the copy on the board. They wrote between four lines, two close together, and one on each side further apart.

In reading they have found the word method alone unsatisfactory,

and have gone back to the alphabet, to a certain extent, beginning with the letter *i*. It reminds me forcibly of the days of my childhood, to see the alphabet with illustrations at the beginning of the book.

In this same grade I heard a class in arithmetic recite, but found nothing particularly new, except that there was but one blackboard in the room, and that for the teacher's use. They teach fewer subjects than we; and I saw some ingenious contrivances for explanation of arithmetic in the higher grades, but these were found in the manual training work.

In geography, more attention is paid to local geography and less to the geography of other countries.

QUEER NOTIONS OF AMERICA.

It grew to be quite a habit with the members of our party to collect all the queer ideas concerning our country held by Germans whom we met. For instance, one woman gravely inquired of me if we were much troubled in San Francisco with wild animals. When we laughed, as we all supposed she was joking, she looked at me quite seriously, and said: "You have not answered my question." This from a woman who had been a governess in England for seventeen years, and who spoke German, French, and English perfectly, and who was as well a fine musician. It is quite common for Americans to be asked where they learned to speak English.

But their knowledge of their own country is perfect. Such thorough training in the geography and history of their own country (for geography and history go hand in hand) leads to one grand result,—the instruction is such that it makes them patriotic citizens.

Text-books on geography generally have no maps, and consist of bare facts. This leaves much to be supplied by the teacher. An atlas is in the hands of all pupils beyond the third year. Plans and maps are drawn, beginning with that of the school-house, and extending to those including a radius of twenty miles. The relations of cause and effect are brought out distinctly in geography. One noticeable point found in all teaching is, that the teacher has a definite aim in view, and every question tends toward the accomplishment of that end. I can illustrate this in an account of a history recitation.

GEOGRAPHY AND HISTORY.

I found the people whom I met so well versed in history that when I visited the "Girls' Higher School" in Dresden, I was pleased to find the first grade about to begin their recitation. The subject for the

day was Charlemagne. To my surprise the question and answer method was used; a map hung in front of the class, and the pupils, as called upon, pointed out the route over which the conqueror traveled. Constantly, the teacher gave information not contained in the text-book. At last a pupil was called upon to tell all that had been brought out in the day's lesson, and I was surprised to find that the whole history of Charlemagne had been carefully gone over. This had been done without any apparent effort, and so skillfully were the questions asked that, upon thinking it over, I could see that not one question had been asked without a definite aim in view. Later, the teacher showed me barely a page and a half in the text-book, which the pupils were expected to "read over" as a preparation for the next day's work. So much depends upon the teacher. Pictures as well as maps are in constant use for both geography and history. The professor told me, however, that he did not have the pupils draw their own maps in connection with history. The results are not commensurate with the time employed. This lesson, also, brought out the method of instruction, entirely biographical. Review, review, review, seems to be a most important factor. They spend far more time on history than we do; and then, again, they have the benefit of their museums and art galleries; besides, they supplement these by collections of various kinds of their own.

The next recitation that I attended was one in English. As I have said before, I was surprised to find that every one knew more or less English, and I was anxious to learn how this knowledge is acquired. The professor was a German who had lived in England for six years. Indeed, I found everywhere people who had gone to England to live for a term of years in order to acquire the language, and had then returned to their own country to teach. In every case they spoke it beautifully, without a trace of foreign accent. The teachers are preferred to those of English birth; as, it is said, they know the difficulties encountered by their pupils better than a foreigner. My national pride received a severe blow upon being informed that, while there are English teachers in Germany, no American will be tolerated. Our accent is too bad.

STUDY OF ENGLISH.

But to return to the waiting class. It was the only ill-behaved class that I saw. They were silly girls of sixteen years, who laughed and talked continually. The lesson was Wordsworth's "We are Seven." The pronunciation, with the exception of the ubiquitous *th*,

was good, and the lesson was conducted in English; the derivation of various words studied, grammatical relations referred to, kind of poetry, school to which the poet belonged, the geography of the country in which the poem was written was spoken of, and that brought up a talk upon the customs of the country, the time the child ate her frugal meal. The cause of the long summer days made a most interesting hour; and when, later, I visited the Wordsworth country, I could not help realizing what a faithful picture had been drawn in that English recitation in a German school. Not a point had been omitted that should have been brought up, had the same poem been an exercise in one of our own schools.

I inquired of a professor how they secured regular attendance. Happy teachers! the compulsory education law is enforced; a truant officer is dispatched, and the parent is fined if he persists in keeping his child from school. As far as lessons are concerned the teachers say that they have but little trouble. A child in Germany knows that it has no future without an education; no state offices are open to him. It means three years in the army instead of one.

SCHOOLS FOR DULL PUPILS.

In some cities there are schools for dull pupils. Any child that has been in the ordinary schools for two years and found incapable of doing the work with the others is sent to this school.

In the gymnasium in Brunswick, the promotion depends upon the last three months' work. They are marked: 1, very good; 2, good; 3, sufficient; 4, not sufficient; 5, very, very bad. If a boy has 4 in any principal branch, he is not promoted.

School begins at seven in the summer and eight in the winter. Most of the afternoons are free, but on certain days they have compulsory games of cricket, etc. In the lower three classes, that is from nine to twelve years of age, they have but one hour home study; in the next three years, two to three hours.

I am sorry not to have time to speak of the work I saw done in the blind asylum,—modeling, in particular. Neither shall I have time to tell of the manual training which, although in connection with a school in Dresden, is taught from five to seven in the evening, and is not compulsory.

In Germany, teaching is a profession. Years of preparation are necessary; but when a position is obtained, it is for life. As to the pay teachers receive. Of course it is smaller than with us; but when

a teacher is sick his salary continues. When, after years of service, he is obliged to leave on account of infirmity, he is pensioned. After five years' teaching he receives a sum equal to one-third of average income; after that time, it increases with each year of service. Widows receive twenty-four per cent. of their husband's salary.

Schools make excursions of various kiuds: some for botanizing; some for the sake of visiting places of historical interest; and yet others, on geological thoughts intent.

Pensions and High Schools.

No one likes to pay for a dead horse. No one likes to be classed even indirectly with paupers. So we find many who are opposed to teachers' pensions, who ought to be in favor of them.

We are all agreed that experience adds to a teacher's value; that it is desirable to keep experienced teachers in the field longer than they now will remain; that experienced teachers do not receive much better wages than those of no experience, except in a few cities. Some inducement must then be given to keep our best teachers longer in the school-room. What shall that inducement be?

I have no hesitation in answering: higher wages while they are teaching, and a pension when they quit teaching. Or a pension, based upon length of service, to begin when the teacher is granted a life diploma.

A life pension of ten cents a month, for each month taught (after getting a California life diploma) in a California public school, would be a moderate inducement to keep on teaching. As this is intended solely to keep those who are now teaching longer in the service, and to induce able men to take up the profession of teaching instead of other more lucrative pursuits, there would be no need to include those who do not teach at least ten months after they apply for a pension.

The cost to the State of such a pension would be very small. Not more than 10 per cent. of those now teaching, would be entitled to any pension. Three-fourths of these would get less than $10 a month, and they would average about half that. Surely the State would receive more than that value in the increased efficiency of her teachers.

I do not include those teachers of long experience who have only primary certificates, because so few of them are really good teachers. The best of the primary teachers will not be satisfied with a primary

certificate, but will be working for a grammar grade, at least. And a pension law like the above would cause them to work still harder.

Our present high school law is a very poor one. With less expense per pupil than now, *we can have a high school in every district in the State where there are high school pupils to teach.* And the same law that will do this will also give many of our best teachers better wages.

Let all schools be graded on the 15th of June as primary, grammar and high schools. When the parents of two or more pupils who have completed the first eight years of the course of study shall notify the county superintendent on or before the first day of June, that those pupils desire to study the high school course in their district school the following school year, the county superintendent shall grade such school as a high school. Besides the ordinary wages paid by the district, the teacher shall get $8 per month for each high school pupil he teaches, said money to be paid out of the unapportioned county fund. A further allowance of $2 a month per pupil should be given the district for high school supplies. If a city or any school district chose to vote an additional tax for high school purposes, that could be put on the same basis as any other school tax now is.

Now let any district that wishes to withdraw from any existing high school district, do so, and if the remaining districts prefer the present system, they would not be hampered by dissenting districts.

C. M. DRAKE.

A Worthy Official.

When Dr. Harris was under consideration for Commissioner of Education, he went to President Harrison and told him frankly he thought it only right to say that he had voted for Cleveland. "O that is all right," Mr. Harrison replied: "you are evidently the choice of the teachers of the country, and I am going to appoint you." Now, amusingly enough, Dr. Harris must say to Mr. Cleveland that he voted at this election for Mr. Harrison; for during the four years he has been so impressed by the President's sound views on education that he wanted him retained. But we think this will be no disqualification in Mr. Cleveland's eyes; and if the teachers thought they wanted Dr. Harris four years ago, they know they want him now.

THE world is indebted to the Boston *Transcript* for a definition. "A fad is anything which arouses evanescent mentality, while a cult is anything which inspires permanent mentality.

Statement of Gains and Losses in School Census Returns for California.

COUNTIES.	1891	1892.	GAIN.	LOSS.
Alameda	24,112	25,052	940	
Alpine	96	105	9	
Amador	2,787	2,831	44	
Butte	4,246	4,187		59
Calaveras	2,339	2,361	22	
Colusa	1,994	2,098	104	
Contra Costa	3,501	3,441		60
Del Norte	516	517	1	
El Dorado	2,059	1,982		77
Fresno	7,662	8,141	479	
Glenn	1,519	1,459		60
Humboldt	5,904	5,999	95	
Inyo	655	682	27	
Kern	2,094	2,225	131	
Lake	1,775	1,641		134
Lassen	1,040	1,033		7
Los Angeles	24,024	25,576	1,552	
Marin	2,429	2,434	5	
Mariposa	1,017	991		26
Mendocino	4,488	4,505	17	
Merced	1,690	1,819	129	
Modoc	1,337	1,349	12	
Mono	297	306	9	
Monterey	4,754	4,986	232	
Napa	3,620	3,604		16
Nevada	4,333	4,343	10	
Orange	4,118	4,157	39	
Placer	3,007	3,010	3	
Plumas	938	1,000	62	
Sacramento	7,869	7,787		82
San Benito	1,954	2,085	131	
San Bernardino	7,101	7,826	635	
San Diego	8,642	8,512		130
San Francisco	62,456	63,933	1,477	
San Joaquin	6,479	6,865	386	
San Luis Obispo	4,813	4,957	144	
San Mateo	2,593	2,641	48	
Santa Barbara	4,285	4,525	240	
Santa Clara	12,600	13,171	571	
Santa Cruz	4,994	5,250	256	
Shasta	3,290	3,302	12	
Sierra	1,001	1,006	5	
Siskiyou	2,759	2,846	87	
Solano	4,553	4,513		40
Sonoma	8,377	8,500	123	
Stanislaus	2,349	2,371	22	
Sutter	1,282	1,275		7
Tehama	2,546	2,624	78	
Trinity	750	721		29
Tulare	16,768	17,109	341	
Tuolumne	1,508	1,474		34
Ventura	2,876	3,148	272	
Yolo	3,418	3,478	60	
Yuba	2,071	2,144	73	
TOTAL	285,775	293,897	8,883	761

METHODS AND AIDS.

Geometry.

[Taught in the eighth grade of the Red Bluff Public School. Average age of pupils 14 years.]

1. Body, volume, surface, line, and point developed, first, by analysis; second, by synthesis.

2. *Lines.*—Straight, curved, broken, composite, parallel, horizontal, vertical, oblique. Pupils to represent each on blackboard.

3. *Curved Lines.*—Circumference, arc, chord, circle { diameter. radius. Pupils to represent each on black board.

4. *a.* Symbols and abbreviations; *b.* Axioms, *committed to memory.*

5. *Angles.* 1. Angular space around a point. Why 1–360th of this space is taken as a unit. Degrees, minutes, seconds. 2. Right angles, straight angles, acute angles, obtuse angles, complementary angles, supplementary angles, adjacent angles, reflex angles, vertical angles. 3. Construction: Angle of 60°. Bisect an angle. Construct angles of 70°, 40°, 85°, 45°, etc. 4. Perpendicular lines. Oblique lines. When one straight line meets another straight line, and makes the adjacent angles equal, each of these angles is called a right angle. 5. Construction. Erect lines bisector, lines at point within the line, lines at end of line without producing the lines. Drop a line from a given point to a given line.

6. 1. *Equal angles.* (co+in+cide=to fall in together.) 2. Construct an angle equal to a given angle. 3. Theorem: Vertical angles are equal.

7. Construction: Draw a parallel to a given line through a given point.

8. 1. Name angles formed when two parallel lines are cut by a third straight line. 2. Theorem: When two parallel lines are cut by a third straight line,—I., the ext.–int. angles are equal; II., the alt.–int. angles are equal. 3. If two straight lines cut a third straight line so that the ext.–int. angles, or the alt.–int. angles are equal, the lines are parallel.

9. *Triangles.* 1. Sides, perimeter, vertices. 2. Equilateral, Isosceles, Scalene. 3. Right, acute, obtuse. 4. Equilateral, similar, equal. 5. Base and altitude.

10. Theorem: The sum of the angles of a triangle is equal to 180°. Construction: Two angles of a triangle given, to find, by construction, the third.

11. Construction: Construct triangle by measuring one side and two adjacent angles of a given triangle. Theorem: Two angles are equal if a side and the two adjacent angles of one are equal, respectively, to a side and two adjacent angles of the other.

12. Construct triangle by measuring two sides and included angle of a given triangle. Theorem: Two triangles are equal if two sides and the included angle of one are equal, respectively, to two sides and the included angle of the other.

13. Theorem: 1. In an isosceles triangle, the angles opposite the equal sides are equal. 2. If two angles of a triangle are equal, the opposite sides are equal, and the triangle is isosceles.

14. Theorem: 1. Two triangles are equal if the sides of one are equal, respectively, to those of the other. 2. Construction: Construct a triangle by measuring three sides of a given triangle.

15. 1. Two right triangles are equal if the hypotenuse and a leg of one are equal respectively to the hypotenuse and a leg of the other. 2. Construct a right triangle by measuring hypotenuse and one leg of given right triangle.

This abstract covers the ground of one year's work, as recommended in the course of study of Tehama county. The plan is being used in the eighth grade of the Red Bluff public school during the present year, and the members of the class have become so interested in the work, and have taken it so readily, that, without crowding or neglecting other studies, they have, in ten weeks, completed the work to No. 8 as given in the abstract. FRANCES BROTHERTON.

A Number Game.

Passing quickly through the aisles, crayon in hand, I place a number on each slate, not going beyond 60. A boy or girl is then called to the platform, holding the slate so all can see the number. The children rise in turn, hold up their slates, and, telling what their numbers are, ask the pupil on the platform a question. When he fails to answer correctly, he goes to his seat, and the one who asked the question answers it and takes his place.

Suppose the boy's number to be 45, the questions will run like this: "My number is 37, how much more is your's than mine?"

"My number is 10; if cents, how many 10 cent tops could you buy, and how much over?"

"My number is 27, add mine to yours."

"How many nickels in your number?"

"If my number be taken from your number, what will be left?"

"Your number is how many times my number?" etc.

This calls for close attention and rapid thinking. If the scholar who is being questioned is a little slow in answering, the others grow wild with excitement, and in their eagerness to answer for him, rise from their seats and even press forward as far as the platform. But noise and confusion of this kind does not hurt a school, and the teacher will feel amply repaid by a look into the bright faces and shining eyes of the happy little people.—SARA E. CLARK, in *Intelligence*.

Three Ways of Telling the Truth.

(Charles' mother was expecting company to dinner. She placed a dish of beautiful ruit on the side-board, and told Charles that he must not take any. To-night at dinner you shall have your share, but you must wait till then," she said. "All right, mother," said Charles, "and he sat down by the window and pretended to read. After his mother had gone out he went over to the side-board and pushed the largest pear out of the dish. It rolled on the floor. Then he picked it up, put it in his pocket, and when he was out doors he ate it. His mother missed that particular pear, and she asked, "Charles, did you take that large pear from the dish?" "No, mother, I did not," said Charles, and his mother believed him.)

Well, John, what have you to say about my story. I want you to feel free to tell what you think. You are quite right, "Charles told the truth." He did not take the pear from the dish. Lucy has something to say.

"His mother did not care whether he took it from the dish or not. She wished to know if he had taken the pear."

That is a good point. Elsie looks as if she had a bright thought. Elsie thinks that Charles told an untruth because he meant to deceive his mother. It may often be that what seems a truth is a lie because a person who said it chose his words to deceive. I want you to think about that a moment. How many think that Charles really told a lie? I see a good many of the class agree with Elsie. Some of you are not sure about it.

Let us suppose another case. A little girl was asked how many miles it was to the next town. "Five miles," she replied. Now it really was seven miles instead of five. What do you think of this story? James thinks that the girl did not do wrong for she meant to

tell the truth. Whom do you think the more truthful, this girl or the boy in the other story? Some one tell me why he thinks so. That is a good answer, Henry. "The right or wrong of what we say depends upon what we mean." Or, to use a larger word, it depends upon our intention. Then it is possible to say what is true and yet not tell the truth? It is possible to tell a lie and not say a word? You look puzzled. I will tell another story. Fanny was very fond of reading stories. She read every minute when she was not in school, and sometimes she read in school. She would open her geography, put her story book inside of it, and pretend to study very hard. When her teacher looked at her, she would look back at her map, and in a minute go back to her story.

Fanny did not tell her teacher that she was studying her geography. How could she tell a lie? Maggie has the right word. "She *acted* a lie."

Suppose I write on the blackboard the lessons we have learned from this talk.

1. We can tell something that is true, and yet not tell the truth.
2. The truth of what we say sometimes depends upon our meaning and not upon our words.
3. It is quite possible to tell a lie by our actions when we do not say a word.
4. We should { speak / think / act } the truth.

—*N. Y. School Journal.*

A Special Teacher of Music in Ungraded County Schools.

ALEX E. FRYE.

[From *The Daily Times-Index*, San Bernardino, California.]

For many years music has been one of the leading studies in the schools of all progressive cities. The care of children's voices, training of the ear, and culture of the musical sense, have long been considered as important at least as the multiplication table and the rule of three. Courses of study present many subjects to train the intellect, but few to develop the sensibilities; many to deal with matters of fact, few to kindle the noble emotions.

Music is essentially the language of emotion. Its melody, harmony and rhythm pervade not only the popular air and the grand

oratorio but also poetry, architecture and mechanics; for what is poetry but the melody of thought, architecture but the harmony of form, mechanics but the rhythm of forces?

It is the music in man that sends him with light heart to the heaviest labor, that brings him joy from the blithe lark, happiness from the opening flower, pleasure from every sound, every motion, every color, every form that lends variety to its natural environment.

In the development of a man, as distinguished from a mere bread-and-butter being, music takes first rank, in that it contains the greatest number of elements to harmonize his existence with his surroundings; and according to Spencer, "Life is but the correspondence of an organism with its environment;" or as Darwin puts it, "The adaptation of an indvidual to its habitat."

But while the tendency in centers of education has been marked for musical culture, it has heretofore been considered impossible, or at least impracticable, to attempt systematic instruction in ungraded country schools, where the child of six is puzzling over two times two beside the pupil of sixteen who is reducing an affected quadratic equation.

It has remained for San Bernardino county to demonstrate that the children of ungraded schools may receive all the benefits of a musical education such as the city pupils have enjoyed for years. The principle of the plan can best be shown by comparing the study of music to that of a brook. The infant and the philosopher may together study the silver thread-stream in the meadow or on the hillside, and both profit by the observation. Each hears the ripple of waves on the pebbles, or sees the tiny bubbles wriggle from the bottom, or little leaves like fairy crafts go sailing by. To the one it tells the story of playful, childlike motion; to the other it speaks of the wonderful law of gravity; to each it reveals some portion of a great creative plan, and both are invited by interest to still higher study. Thus also may the child of six and the pupil of sixteen study music side by side, and receive help in proportion to his receptive faculty.

HOW IT WAS ACCOMPLISHED.

Last spring County Superintendent Beattie conceived the idea of employing a special teacher of music for the ungraded schools. The plan was as bold as it was original, and was fraught with many difficulties. A man must be found possessed of musical qualifications and experience, who would come at a reasonable salary, who would endure the constant travel to all parts of the county where he might be called,

—a man who could interest alike the school children and the various trustees; for without their hearty coöperation the work must fail.

Then the question arose as to how such a man could be paid. There was no county fund at the disposal of the superintendent or supervisors for such a purpose. Moreover, the trustees of various districts have absolute power to engage and dismiss all teachers.

But all difficulties have been surmounted, and today San Bernardino is the banner county of the Union. It is the only county employing a skilled instructor to teach music in its ungraded schools, and upwards of thirty school districts are afire with musical enthusiasm.

How was it brought about? By pure grit and push of one man. Mr. Beattie visited in person the trustees of all districts available, and laid the plan before them. A few were skeptical, a few open in opposition, but the great majority at once saw the value of such a plan and gave it hearty support.

The entire country was scoured, and at length a man was found who would undertake the work. This was Mr. E. D. Wyckoff, of Chicago, pupil of the famous leader of the World's Fair chorus, Mr. W. L. Tomlins. The county trustees agreed to set apart a small sum in each district, which should be paid on regular county warrants, such as the teachers receive. Thus Mr. Wyckoff began his work.

But a storm was brewing. One or two trustees tried to head off the plan. Attorneys were employed, and notice was served on the County Treasurer, Auditor and Superintendent that, if Mr. Wyckoff received his salary, these officers would be sued for the amount thus paid. A test case was made. The issue was tried before Judge Campbell in the Superior Court, and on November 19, a writ of mandamus was issued by the Court ordering the Treasurer to pay the salary.

The citizens of San Bernardino county may well be proud of the movement. Great credit is due Mr. Beattie for his forethought and courage, and also to the various Boards of Trustees, but for whose generous support San Bernardino could not to-day set an example to the 2,700 counties of the United States. Let the good work go on.

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

Our Country Schools.

C. D. KNIGHT, CLERK RANCHETA DISTRICT, SAN LUIS OBISPO CO., CAL.

I have read with interest the discussion pro and con in your excellent JOURNAL, of enriching the School programme of the grammar and primary grades; some even hint at a smattering of the sciences. I am glad a good teacher, remonstrates against carrying the object teaching too far. These are all good in their place; but when the real bone and sinew of the education is neglected to give place to these smatterings from work that the pupils will take up later, if they finish the course, it is time wasted. If they do not finish, the little benefit derived from them by the average pupil, will not pay for the loss sustained by neglecting the work belonging to the grade. I do not want to add a word more to discussion; but do ask to be allowed to take my place at the foot of the educational column and carry a banner inscribed to the interests of our country schools.

I believe the same principle that Mr. Wanamaker applies to the postal matters will apply equally well to our country schools. He claims that the postal revenue is derived from the rural as well as the urban population, and that the system should bestow its benefits alike.

It has been claimed by persons well posted in the People's movement, that the rural population pays 80 per cent of the taxes. I have not seen it contradicted, so will assume that the rural population pays maximum amount of the money and receive a minimum amount of the benefits.

When a business venture is put on foot, the person who puts in the most money is supposed to have the most say. But not so in the school matter. We claim that our country schools, as a class, are discriminated against or neglected, if that will suit better, from first to last. Every plan discussed, rejected or accepted, that relates to school work is on the basis of a well graded town school. Our teachers are all drilled with a view to a town position, which their few terms in the country are expected to better fit them to fill. Now we raise our voice in protest against this injustice.

About all the attention the country schools get is from the county superintendents, who strive to add a sort of a codicil to the young persons' education at the yearly county institute that will enable them to adjust their learning to the needs of a country district.

What we need is a corps of country teachers. We want our work viewed from our own ground. We want the environment of our country schools examined, and our educational facilities adapted to our country needs. In reading the lines of the famous men of our nation you will find that more than 80 per cent of them come from the farm.

Taking into consideration the facts that our rural community furnish, not only the most money, to carry on our great free school system, but furnish the majority of the men at the head of the great enterprises of our nation, we think that our demand for consideration and attention (though tardy) is not only modest but just.

Manual Training in the Oakland Schools.

REPORT OF COMMITTEE ADOPTED WITHOUT A DISSENTING VOTE.

To the Honorable Board of Education of the City of Oakland:

GENTLEMEN:—We, the undersigned, beg leave to submit the following as a majority report of the Committee on Industrial Education, for the school year commencing July 1st, 1891, and closing June 30th, 1892.

We find that the following expenditures have been made on account of Industrial training during the said period, viz.:

For new tools	$ 59 50
For lumber	68 96
For supplies other than tools and lumber	21 40
Total expenditures (exclusive of salary of Instructor)	$149 86

We find that the instructor, Mr. R. P. Gleason, employs his time as follows: at the Franklin school two mornings and one afternoon each week; at the Lincoln school three mornings each week; teaching clay-modeling two afternoons of each week, and teaching drawing in the Evening school two evenings each week.

The following are the names of the schools and the grades therein, and the number of boys and girls receiving manual training (exclusive of clay-work and drawing) therein, viz.:

FRANKLIN SCHOOL.

Grades.	Boys.	Girls.	Total.
B 9th	7	5	12
A 9th	8	23	31
B 8th	15	20	35
A 8th	25	22	47
Total	55	70	125

LINCOLN SCHOOL.

Grades.	Boys.	Girls.	Total.
B 9th	0	0	0
A 9th	7	10	17
B 8th	22	23	45
A 8th	20	21	41
Total	49	54	103

Total number of boys at both schools.....104
Total number of girls at both schools.....124
Total number of boys and girls.....228

There are three classes of boys and three classes of girls in each of said schools, making twelve classes at both schools.

Average class of boys at Franklin school..... 18
" " girls " " 23
" " boys at Lincoln " 16
" " girls " " 18
Twelve classes, average per class..... 19
Total expenditures (not counting Instructor's salary).....$149 86
Total number of boys and girls taught.....228
Average cost per pupil, not counting salary of Instructor.....$ .65

The salary of Mr. R. P. Gleason, the Instructor, [$1 800—ED.] cannot be very well averaged, as his whole time is not devoted to those classes of boys and girls, as he devotes time to clay-work and classes in drawing in the Evening school which is not considered in arriving at the foregoing totals.

WHAT HAS BEEN TAUGHT.

The boys have been taught the use of tools in making what is generally known as "joint-work," at the carpenters' bench. The drawings of the different joints they have to make are placed before them, and they become familiar with the names of the joints and their respective uses, and the advantages of one kind over another for certain kinds of work, such as dove-tailing, scarfing, simple jointing, notched jointing, mortise and tenon joints, etc. They learn the necessity of

accuracy and precision, and that the different parts must fit together; their work is done at the bench in the sight of all; they cannot carry it home and have assistance from some older person, and they thereby become self-reliant and manly. The girls are taught carving in the same way.

The boys have two hours per week which they devote to manual training, which, taking forty-two weeks for the school year, gives them only eighty-four hours' work, or ten and one-half days' time, counting eight hours as a day's labor.

The girls have on an average a little over an hour per week, say one hour and ten minutes, which at forty-two weeks in the school-year, would make forty-nine hours, or six days and one hour, count ing eight hours as a day's labor and it seems hardly fair for some peo ple to expect us to turn out accomplished carpenters or carvers in the short space of ten and one-half days, and six days and one hour served at labor by the boys and girls respectively.

But judging from the work exhibited by the manual training classes at the High school, at the end of the term, such as carvings, screens, step-ladders, boxes, benches, medicine-chests, checker-boards, dove-tailing, joint-work and inlaying work, we believe that the work of the manual training classes will equal if not exceed in quality of workmanship, the work done by a great majority of the young men acquiring a knowledge of the trades (outside of the schools,) after a year's experience in the "catch-as-catch-can" method now prevailing.

The idea of manual training is not, as some people think, to teach the trade of carpentry, blacksmithing, etc., but to more evenly develop the powers given the children by nature.

ITS PLACE.

The manual training school is to the trades, what the grammar schools are to the professions of law, medicine, etc. They do not intend to teach those professions, but simply to lay the foundation for them, and so it is with the manual training schools, they simply try to lay the foundation for such work and to develop the moral, physical and mechanical side of the child's nature.

Statistics show that nearly ninety per cent. of the boys who leave the public schools take up some kind of manual work. Then why should not something be done in our public schools for those boys, and thereby lay a foundation for their life work? But we may go one step further. The statistics show that most of our criminals are made

from boys who are between the ages of twelve and eighteen years. These boys were not criminals at the start, they did not like their books, or had difficulty with their teachers. There were no openings for them in the professions or in business. With no means of support, they naturally, through idleness, drift into crime. They cannot work, for they know not how to handle tools, they are ashamed to beg and therefore steal. If they had been taught to use their hands, brains and strong bodies in industrial pursuits, they might have been saved to society and to their parents and to themselves.

We need more room for the purpose of manual training, we need more benches and more tools. The education of the children in manual training should commence with the seventh grades, or sooner, so that when boys and girls leave the Grammar schools they will be better fitted for life, more self-reliant; and helpful to their parents, if necessary.

The teachers should learn that they will have to encourage the idea of manual training; *it has come to stay*, and they should not discourage any pupil from acquiring a knowledge thereby, because it causes them to repeat a part of the lesson taught in the absence of the manual training pupil.

We recommend that in the new school houses to be built, that proper and efficient means be placed at the service of the department of manual training, as well for the girls as the boys. In all our new schools there should be connected with the lunch-rooms of the teachers, ample and efficient means for the teaching of cookery, and we believe that the petition of the ladies and gentlemen of this city now on file in the office of the Board of Education, for the establishment of a class or classes in cookery in the public schools of this city should be granted.

Respectfully submitted,

J. C. PLUNKETT,
JOHN RUSS,
of Committee on Industrial Education.

The Best Cure for Crime.

IMPORTANT BEARING OF EDUCATION ON NATURAL TENDENCIES.

Dr. Arthur MacDonald, of the U. S. Bureau of Education, gave a lecture at the residence of Miss Clara Barton, in Washington, D. C., recently. A number of distinguished persons were among the hearers. Dr. MacDonald took for his subject "Embryology, anthropometry,

and psychology of crime," and his purpose was to show, as he stated in opening, that seemingly unrelated facts are from the point of view of nature closely allied. Thus the study of the lower realms of nature may give an insight into her more developed stages. The equivalents of crime are seen in plant life and in the animal kingdom, the number increasing in variety as we approach man. Crime in its evolution first exceeded the ferocity of wild beasts; in its next stage, cannibalism gave way to mutilation and torture; modern civilized war is the same in essence, though different in form.

"A striking thing in criminal children is the large number of anomalies. Moral anomalies, which in adults would indicate criminality, are much larger in proportion in children, but disappear through the influence of education.

"It will not be out of place to speak briefly of the scientific study, cure and prevention of crime, and its vital relation to education. The method of a scientific study of criminals is a thorough investigation of the criminal himself, both pyschologically and physically, so that the underlying and constant causes of crime can be traced out. There is no other rational road to the preventing and repression of crime. Whatever the remedy, causes must be studied first. Negative results are as important as positive to science. If it should be shown that some crime is incurable that would be valuable to know, especially what degree of reformation can be expected.

"If, as Lombroso thinks, crime is a return to the primitive and barbarous state of our ancestors, the criminal being a savage born into modern civilization, then for such there is little hope of reformation. But these are criminals by nature and constitute a very small proportion, less than one-tenth. The French school of criminology has shown that the greater part of crime arises out of social conditions, and hence is amenable to reformation by the changing of these conditions. Buechner says that defect of intelligence, poverty, and want of education are the three great factors in crime. Maj. McClaughry, of wide prison experience, and chief of the Chicago police, considers criminal parentage and associations, and neglect of children by their parents, as first among the many causes of the criminal class. D'Olive Crona, author of a French work on habitual criminality, asserts that three-fourths of those who enter prison have been conducted to crime from the results of a neglected education.

"Now education in the narrow sense of mere intellectual instruction is not sufficient to reform children who spend one-fourth of the

day in school, and three-fourths on the street, or with criminal, drunken, or idle parents. But are there not reform schools? Yes, but no provision has been made for the little children. Not a few of the inmates of reformatories come there practically incorrigible, and the testimony of prison wardens is that some of the most hopeless prisoners are graduates of the reform schools.

"The fault is not in the reform schools, but in allowing children to live the first years of their life in surroundings that almost predestine to crime. Reformatories are expected to erase the indelible criminal impressions made upon children from birth, or before, till the age of six. Instead of deserving criticism, the wonder is that reformatories do as much as they do. In brief, it is useless to expect any great decrease in crime, especially habitual crime, until very young children are properly cared for; that is, until they receive the moral and social education of a home or home-like institution. This is the foundation of all preventions of crime. But much remains to be done after the child has had this good start, for there are still dangers of falling into crime. The method of prevention from this stage on consists in moral, mental, and physical training; in other words, education in the true sense.

"The criminally inclined are especially weak in moral impulse, and below the average in intellect and physique. The education of the will is the main factor, but the training of the intellect and sentiments are necessary to this end. The remedy, therefore, for the crime must be general, gradual, and constant; there is no specific.

"Every reformatory is a school in which emphasis is laid upon moral and industrial habits, which in the young become, as it were, a part of their nervous organization. This is shown by the fact that moral individuals, when hypnotized, unconsciously resist evil suggestions. When passion, perplexity, or temptation causes the loss of self-control, then it is that good habits implanted in childhood and woven into the constitution overcome evil and criminal impulses. The force of habit is as strong for good as it is for evil."

Biennial Convention of Superintendents.

The convention pursuant to notice was called to order by State Superintendent, J. W. Anderson, in the Commercial school building, Powell street, San Francisco, Tuesday, December 9, 1892.

After brief preliminary remarks by the Superintendent, Superintendent John Swett, of San Francisco, delivered a short address of welcome. The convention organized by the election of John Swett, Vice-President; W. P. Stone, of Sacramento, a Deputy in the State Superintendent's office, Secretary; Superintendent F. McG. Martin, of Sonoma, assistant Secretary. The following Superintendents were present during all or part of the sessions:

County—G. W. Frick, Alameda; Wm. M. Nuner, Jr., Calaveras; Mrs. H. L. Wilson, Colusa; W. A. Kirkwood, Contra Costa; C. B. Wakefield, El Dorado; Thos. J. Kirk, Fresno; J. B. Brown, Humboldt; J. H. Shannon, Inyo; Alfred Harrell, Kern; Mrs. E. K. Harrington, Lake; Mrs. M. P. Woodin, Lassen; W. W. Seaman, Los Angeles; Robert Furlong, Marin; Mrs. Wm. D. Egenhoff, Mariposa; W. K. Dillingham, Mendocino; J. A Norvell, Merced; Job Wood, Jr., Monterey; Anna E. Dixon, Napa; W. J. Rogers, Nevada; J. P. Greeley, Orange; O. F. Seavy, Placer; B. F. Howard, Sacramento; J. N. Thompson, San Benito; G. W. Beattie, San Bernardino; Harr Wagner, San Diego; John Swett, San Francisco; George Goodell, San Joaquin; W. M. Armstrong, San Louis Obispo; J. F. Utter, San Mateo; G. E. Thurmond, Santa Barbara; L. J. Chipman, Santa Clara; John W. Linscott, Santa Cruz; Mrs. J. N. Logan, Shasta; T. J. McGrath, Sierra; C. B. Webster, Solano; Mrs. F. McG. Martin, Sonoma; W. B. Howard, Stanislaus; A. B. Coffey, Sutter; Belle Miller, Tehama; S. A. Crookshanks, Tulare; Samuel T. Black, Ventura; George Banks, Yolo; H. H. Folsom, Yuba; W. M. Finch, Glenn. 45 out of 54.

City—D. J. Sullivan, Alameda; W. M. Friesner, Los Angeles; J. W. McClymonds, Oakland; F. A. Molyneaux, Pomona; Eli F. Brown, Riverside; A. Hart, Sacramento; G. W. McGinnis, Santa Ana; Mr. Dingle, Woodland; Eugene De Burn, San Diego; F. P. Russell, San Jose; Jas. A. Barr, Stockton; W. B. Wallace, Visalia; Alex. E. Frye, San Bernardino; T. S. Heaton, Fresno. 15.

The following were at the various sessions elected honorary members: The Presidents of the State and Stanford Universities; Professors Elmer E. Brown and Earl Barnes of the State and Stanford, respectively; the Principals of the State Normal Schools and ex-Principal Chas. H. Allen, Superintendent of the Educational Exhibit of California; ex-State Superintendents, Ira G. Hoitt and F. M. Campbell, Deputy State Superintendent, Mrs. A. B. Anderson and ex-Deputy State Superintendent, Mrs. F. M. Campbell; P. M. Fisher, of

the PACIFIC EDUCATIONAL JOURNAL; C. H. Keyes, President of the Throop Polytechnic School; Madison Babcock, Deputy Superintendent of San Francisco; James Demnan, ex-City Superintendent of San Francisco and Supervisor elect; Jas. G. Kennedy, Joseph O'Connor and Prof. W. L. C. Smith, of San Francisco.

Superintendent Anderson had gone to the great labor of carefully examining every section of the school law, noting amendments that in his judgment were important, and was thus prepared to submit to the convention something tangible, orderly, and therefore full of promise of a well-spent session. Upon motion, the order he had prepared was followed, being changed only in one instance, namely, for the appointment of a committee on the High school bills, that the sections prepared on this subject by the Superintendent might receive deliberate examination by the convention. Superintendent Anderson being out of the chair at the time, Vice-Chairman Swett appointed on this committee, Messrs. McClymonds, Kirk, Seaman, Linscott, Black, Miss Dixon and Mrs. Martin.

On Resolutions the chair appointed Messrs. Chipman, Wagner, J. B. Brown, Friesner, Miss Miller and Mrs. Egenhoff and Harrington. A committee was also appointed to prepare a plan by which the twenty children whom the San Francisco *Examiner* would send to the Chicago Fair may be best selected. Several very animated discussions took place during the sessions, notably on Section 1775 which was sought to be amended so as to extend recognition to the graduates of schools other than the State University and Normal schools. The proposed amendment was defeated, but later in the session this power was given to City Boards, thus virtually accomplishing the same end, as reciprocity between cities and counties is permissible under the present law.

A motion to repeal Subdivision *Twelve* of Section 1521, relating to an official organ was overwhelmingly voted down.

Among the amendments proposed were the following: Establishing two grades of life and educational diplomas; providing more definitely when districts shall be declared lapsed; providing for teachers' institutes for the city and county of San Francisco; fixing a fee for the renewal of a certificate; in joint districts location of school-house shall determine which course of study shall be followed; (the question of the pay of school clerks was referred to Superintendent Anderson;) census to be taken a month earlier; new districts to be formed and boundaries changed only between the first of January and noon of

first Monday of March; in cities, library funds to be apportioned according to average number of children in each school; appointment of members of County Board to be approved by Superintendent; pay of members of County Boards to cover time spent en route to and from meetings; grammar grade certificates to be valid for six years; women to vote on educational questions and for educational officers; school elections to be held on the first *Friday* of June and not to be conducted under the Australian Ballot Law.

Of all the legislation proposed that relating to High schools seemed to excite most general interest. Realizing the importance of carefully digested work in this direction, Superintendent Anderson proposed adding two sections to the Code to cover the entire subject of county and union district High schools. Taking the acts as they now stand as a basis, he sought to correct every fault found with the law in its application during the past eighteen months. This result of his thorough study of the matter, was submitted to a committee, the members of which invited to their meeting a half-score of experienced Superintendents. As the result of this consultation, Superintendent Anderson will be enabled to recommend to the Legislature such a bill as will meet the conditions and wants of the communities of the State. When this bill is introduced it will appear in the JOURNAL for general examination by school officers and teachers.

A resolution denunciatory of the State text books was unanimously referred to the Committee on Resolutions. It did not appear again. On Wednesday evening the members enjoyed an excellent literary and musical program prepared for their entertainment by the San Francisco teachers.

In his anxiety to have the convention devote itself strictly to the business for which it was called, the Chairman occasionally laid a strong hand on individuals and as he good-naturedly acknowlged was "pretty ugly at times;" but as the members were men and women of admirable sense, the convention closed in good temper. It certainly deserves the name of having been a "working body."

One day Johnny Jones was instructed by his teacher to write a nautical composition. This is what he wrote:

My life bark sails upon the sea,
With no rough winds to yank 'er;
My father is the "mainstay," and
My mother is the "spanker."

Opinion on Union District High School Bill.

[Superintendent Webster, of Solano, sends the following, desiring its publication as being of interest to the school officers and teachers of the State.—ED.]

In the Superior Court of the State of California, in and for the County of Solano.

The People on Relation of W. B. Brown, *Plaintiff*,
vs.
Union High School District of Solano County, *Defendant.*
} OPINION.

This is an action to have Armejo Union High School District declared to have no legal existence, upon the following grounds, to-wit:

First—There are eight school districts adjoining and within the territory designated as the Union High School District, to-wit: Crystal, Dover, Gomer, Green Valley, Suisun, Fairfield, Rockville and Union, each district having a Board of Trustees; but that the said Trustees did not act as a Board but as individuals when they signed the petition for an election for a Union High School.

Second—That the petition of resident electors does not contain the names of one hundred resident electors in each of said school districts, but does contain one hundred names of resident electors within the proposed Union High School District. * * *

After quoting the law the Judge declares: "It appears that a majority of the persons acting as Trustees in each of the eight school districts did sign the Trustees, petition, but not as Boards of Trustees, and it is claimed that they could act in no other way than as a Board of Trustees of their respective school districts. It will be seen by reference to the Act, that when the High school is to be in and for a city or incorporated town, a majority of the Board of Education must sign the petition, and I apprehend that they must act as a Board. But when the High school is to be a Union High School District, the Act provides that 'a majority of the Trustees * * * shall unite in a petition,' without saying they shall petition as a Board. Why the Legislature should provide in one case that the majority of the Board of Education should petition, and in the other, a majority of the Trustees, is not easy to determine, nor do I deem it of very much importance in determining what the Lesislative intent was. Had the Legislature intended that in petitioning, the Trustees of each school district should act as a Board of School Trustees it would have said so. Besides, the distinction it did make, indicates to me there was no such legislative intent.

"In the interpretation of a statute like the one in question, the general intent of the Legislature is the first important thing to be determined, and this when ascertained, forms the key to the meaning of all parts of the Act. This is generally to be determined from the title. The title to this Act is 'An Act to provide for the establishment of High schools in the State of California.' From this we readily understand the Legislature meant to provide a system whereby High schools might be established throughout the State. The machinery, or procedure for this is set out in the two sections of the Act above quoted, and following this intent as there manifested and the procedure provided we find that the particular intent of the Legislature was to establish High schools in certain cities and incorporated towns, and Union High School Districts for two or more adjoining school districts. This then being the object of the Act, and it being clearly within the power of the Legislature to pass, it becomes the duty of the Court to so interpret it, in accordance with the rules of construing and interpreting Statutes, so that if it be possible, to give it that meaning intended by the Legislature, and make its provisions operative.

"General terms must receive such reasonable interpretation as will leave or make all the provisions practically operative; and every part must be viewed in connection with the whole so as to make all its parts harmonize if practicable and give a sensible and intelligent effect to each. And in this connection it is not to be presumed that the Legislature intended any part of the Act of March 20, 1891, to be without meaning or ineffective. (Sutherland on Statutory Construction, page 412.)

"It is a conclusive presumption that in this as in all Acts, the Legislature was in possession of all facts in relation to which the legislative will is formulated into law, and that that will is formulated so that it will conform to the conditions of the subject as known to exist, and thus make the law operative. (Suther. par. 331.)

"This is a general law, applying to all classes it enumerates, to-wit: cities and incorporated towns having a population of 1,500 or more, and to *all school districts*, adjoining, in the State of California.

"The Legislature must have known (as Counsel for Plaintiff says) that there are very few school districts in the country that have as many as fifty electors. Knowing this fact, the Legislature would not have passed an Act providing for the formation of Union High School Districts and attached to it such machinery as would prevent that ob-

ject being attained. If it be true that the petition must be signed by one hundred resident electors in each school district seeking to form a Union High School District, then none, or but a very few Union High School Districts would ever be formed in this State, and the Legislature must have known it, which is entirely at variance with the general purpose, meaning and intent of the Act. 'Union High School District' is used throughout the Act in opposition to 'city or incorporated town.' That there is no political division actually formed with a corporate existence known as 'Union High School District' until declared so by the electors of the territory proposed to be incorporated, at the election held for that purpose, is self-evident, but there is a proposed political division of that name with boundaries as well known, designated and defined, by naming the school districts which are to compose it, as they will ever be known or designated.

"But for the purpose of petitioning, the territory comprised within the several adjoining school districts is to be treated as the Union High School District. And holding these views, it seems plain to me that the words in Section 2, 'signed by not less than one hundred resident electors of such * * * school district' has no reference to the individual school districts, but to all of them collectively as the 'Union High School District.'

"For the reasons here expressed, the demurrer should be sustained, and it is so ordered."

A. J. BUCKLES,

December 27, 1892. *Judge of the Superior Court.*

Whittier Reform School and the California Editors.

The Superintendent of the Whittier Reform School, on invitation of the secretary, Mr. J. A. Woodson, of the Sacramento *Record-Union*, visited the State Editorial Association in annual meeting at Pasadena on the 17th of last month. He was called on for some remarks about the school, and in response asked the assistance of the editors of California in securing from the legislature, four amendments to the present law governing this school.

1. So that children shall be committed to the guardianship of the school during their minority; thus giving the trustees power to place a boy out in a suitable home within one week, one month or one year from the time he was sent to the school, as they might see was best for

the boy. At present a boy is committed for from one to five years, and the trustees have no discretion in the matter of control over the child after his "time is up."

2. To change the name of the school from "Reform School for Juvenile Offenders" to "Whittier State School" or some other name that contains no penal suggestions.

3. To allow only Superior Judges to commit, thus taking from the police judges and justices of the peace the power to commit. The village justice is liable to be too easily induced to say, "five years in Whittier."

4. To have a law passed prohibiting the detention of boys and girls in jail pending their commitment to Whittier. Many a child receives his first degree in the free masonry of crime while waiting in the county jail for a convenient time to be brought to Whittier. A sad way for the State to begin the child's reformation.

County Institutes.

BUTTE.—The 26th annual session of the Butte County Teachers' Institute convened in Oroville, Tuesday, December 20th. Superintendent Stout, in his address, announced that the schools of Butte county are in a most prosperous condition, and that school-work generally is being well done. The program of the institute was varied and interesting and the papers read and lectures given elicited much discussion, which cannot but prove beneficial to the teachers present and their schools. Principal Evans, of Biggs, presented the subject of "Physics;" Principal Verney, of Bangor, the subject of "Ungraded Schools;" Mrs. L. A. B. Curtis, of Pentz, read a practical paper on "Music in our District Schools;" J. A. Snell, of the Gridley High school, gave an interesting talk on "Practical Entomology;" Principal Hennessy, of Oroville, discussed the subject of "Teaching History." "How to use the State Text-books," provoked an animated discussion in which Misses Wilson, Bennett, Shippee, Mrs. Morgan, Messrs. Dunn, Snell, Slaven, and Prof. Moses, of Berkeley, participated.

The main points adduced from the discussion were that the geography, physiology and language lesson were fine books. None better had ever been used. More readers were needed and a revision of arithmetic and history necessary.

S. S. Boynton read an essay on the "Animals of Butte county."

In this he took up the habits, mode of life, etc., of the different mammals, showing that of all the classes but three are now extinct, viz.: the elk, antelope and grizzly bear. The essay was greeted with marked attention and it was ordered published.

E. N. Mabrey introduced the subject of "Language Lessons" and P. L. Tople, of Cherokee, occupied a half-hour in a general talk on "School Law and School Matters."

The instructors and lecturers were Prof. Moses, of the State University, Prof. Wilson, of the Chico Normal School, and Miss R. Anna Morris, of the Brooklyn Normal School of Physical Culture.

Superintendent Stout declares the session the most highly successful in the county's history. M.

KERN.—A most interesting meeting of the Kern County Institute was held at Bakersfield, December 21, 22 and 23. Dr. Eli F. Brown, Superintendent of Riverside schools, acted as conductor and gave the teachers many interesting and instructive lessons. About forty teachers were in attendance.

The institute was opened Wednesday, December 21, by appropriate remarks by County Superintendent Harrell. The conductor discussed the following subjects: "Important Parts of Arithmetic," "Mental Science," "Child Nature," "School Aims" and "First Steps in Geography." C. N. Mills, Principal of Bakersfield school, gave a class exercise on Algebraic factoring; and Superintendent Harrell a lesson in History; class drawn from the institute.

Thursday the conductor gave talks on "The Language of the School-room," "Physiology and Hygiene," "Supplementary Reading." George T. Hanscom, of Delano, read a paper on "Civil Government;" Miss Metcalf an essay, "Friday Afternoon;" E. Rousseau, "Order, Discipline and Attention."

Friday these subjects were discussed: By conductor, "Study and Recitation," "Composition Writing," "The Program" and "School Literature;" Miss Emery, "Work for Beginners;" Miss Crusoe, "Ruts;" Miss Ward, of Oakland, "Physical Culture," "Delsarte." Telegrams of good wishes and greeting were exchanged with Tulare institute.

A resolution urging the rejection of State Series of text books was passed.

The first two evenings were filled by lectures by Dr. Brown. The institute was closed by a reception to the institute, given by the Bakersfield teachers. KITTIE M. CRUSOE, Secretary.

LOS ANGELES CITY.—A Los Angeles morning paper commenting upon the City Teachers' Institute which adjourned Dec. 23, questioned whether any practical benefit had been derived by the teachers in attendance. The following resolutions passed in the various sections show what the teachers thought about it:

Resolved, That we, the teachers, feel that this institute has been to us a means of grace and growth largely owing to the impetus given our thoughts by the masters of pedagogy from Berkeley and Stanford in their admirable reports of historical and experimental work along the lines of the child's mental development.

Also, That we feel that one such thought as that of Prof. Barnes' to the effect that the utilitarian as composing primarily the child's mental furnishing and attitude, should be the starting point rather than goal for our excursion into the unknown is of itself a truth large and vital enough to repay the attendance of any teacher who would spend his force along nature's lines.

Both Professors Brown and Barnes were invited to attend the next institute.

FRESNO.—The County Institute met at 1 P. M., Monday, Dec. 26. Opened by a brief talk by Superintendent Kirk, followed by prayer by Rev. W. H. Martin.

Prof. Chas. H. Allen, well known to the teachers of the county, received a hearty welcome and spoke on the requisites and duties of the teacher. During the afternoon President Keyes of Throop University provoked an animated discussion by declaring the little text book on Language used in the schools to be of little value. Will S. Monroe and J. G. Kennedy agreed with the speaker. T. L. Heaton, Superintendent of the Fresno City schools and Prof. Allen defended the book. The latter stated that while many could teach the subject without a text book the inexperienced could not and the book to them was very helpful.

The lecturer of the evening, P. M. Fisher, was absent because of the serious illness of his wife. The program was pleasingly filled out with recitations by Miss Jennie M. Long and Bertha A. Reynolds; a short talk by Prof. Earl Barnes on the subject, "A Colt Kindergarten," illustrating by the Palo Alto horse farm the importance of training in the line of usefulness; Prof. Allen followed in much the same line, laying stress on the formation of right habits.

On Tuesday, C. H. Keyes spoke on "Methods and Purposes of the Primary Reading Class." Briefly stated his points were: In the order of their value, the word method first, sentence method second, the alphabet method third. Two short lessons are better than one

long one. Stick to phonic principles. Supplementary books are necessary. All work on the board should be in script. The teacher shall be full of devices. He also spoke on the subject of History. It should be interwoven with Geography and Reading. It should be begun as early as the third or fourth grade. We should study it to learn the mistakes and successes of men and nations so as to order our lives accordingly.

Mr. Allen spoke on the subject of School Government. He defined an orderly school to be one in which each pupil is doing just what he should at the present time and in the proper way, always submitting to properly constituted anthority. A teacher must train his pupils to prompt and certain obedience. Every teacher should be very careful what she says to her school. It is not as difficult to know what to say as what not to say. A noisy teacher never has a quiet school. Teachers should be quiet themselves if they expect to have a quiet school. The speaker said that mischief is fun in the wrong place. The children must have fun, and so a teacher had best take such measures as will make the fun of such a nature as will not disturb the school and still be beneficial to the pupils. If there is not some channel of escape for the pent-up fun within the chiidren it will burst its bounds and so cause trouble.

State Superintendent Anderson was introduced, meeting a warm reception. The fact of his being well known in a business way in Fresno seemed to add additional point and force to his practical speech.

At 7:30 P. M. the State Association began its sessions and the County Institute was merged into it, subject to the county superintendent's call for separate sessions.





Group in Rotunda of Capitol at Sacramento.

NORMAL SCHOOLS.

San Jose.

The first annual meeting of the Normal Alumni Association was commenced Tuesday, Dec. 27. The lobby and the platform of the Assembly-room were handsomely decorated. Representatives of all the classes since the first were present.

The President of the Association, Professor Holway, in a brief address, outlined the history of the old Alumni Association and the causes which led to its being disbanded and reorganized on its present plan, which makes every graduate a member of the Alumni Association. "It is hoped," continued the speaker, "to have annual conventions of delegates elected by the thousands of graduates of the Normal School. At these yearly meetings the various educational works of the State will be discussed and concerted action planned for carrying out educational reform."

Professor Childs, Principal of the Normal School and a member of the Association, welcomed the graduates to the Normal and gave them the liberty of the building. He outlined briefly what the State has done for Normal Schools. He stated that he attended a convention shortly after opening his first school (thirty-one years ago) and helped to prepare resolutions asking the Legislature to organize a Normal School. The Legislature appropriated $3000 for a school and this Normal commenced its work in July, 1862, with five students. Since that time the State has given about $600,000 for buildings, and at the last meeting of the Legislature about $175,000 was given for the maintenance of the three Normal Schools. The school is doing much good to the State. By sending out trained teachers every year it is gradually raising the standard and helping to make it a profession. The Trustees, in the standard for admission and improving the course of study, are making the diplomas of the graduates more and more valuable. The teachers are assisted in the County Institutes and are hus helping to make a professional spirit among the teachers who

have not had normal work. What would the graduates do for the Normal School? By energetic and progressive work help their alma mater and make Normal work stand out so prominently that all who wish to engage in teaching will see the necessity of taking a professional course. The students are creating such a feeling and the numbers who are appearing for certificates before the county Board of Education are gradually decreasing.

Miss Kate Cozzens read a paper entitled, "Tendencies in Recent Courses of Studies." She favored a revision of all the courses in the State with the exception of those in San Francisco, Oakland and San Bernardino where a thorough revision had recently been made. Matter in the Arithmetic of no practical use to students should be stricken out.

The discussion of "Higher Education for Normal Graduates" was assigned to Prof. Elmer Brown of the State University and Prof. Earl Barnes of Stanford. As they were absent attending the State Association, Prof. Lange of the State University presented the theme urging an additional four, or at least a special two-year course at a University. Miss Boring of Stanford read a strong paper on the subject prepared by Prof. Barnes. A practical talk on the duty of teachers in caring for the eyesight of the pupils was given by Dr. Wm. Simpson. Elementary Science was presented by L. B. Wilson and Prof. Childs.

County Supts. L. J. Chipman and Job Wood spoke of the demand for High School teachers, and of the important High School legislation recommended by the recent Convention of Superintendents.

Supt. Wood read a paper on the Relation of the Teacher to the Public. The subject was discussed further by Prof. Chas. H. Allen.

Each class held its reunion in a separate room. Two hundred Alumni were present at the sessions and the meeting was pronounced a success.

Chico.

The work of improving the school grounds is still going on. Workmen are busy graveling the drives, laying out walks, making a tennis court, preparing lawns, and planting trees, shrubbery and flowers.

In the library, under the direction of President Pierce, the books are being arranged and catalogued according to the Dewey Decimal System. One hundred or more volumes arrived a few weeks ago, and others to the value of $300 have been ordered. The library now numbers about 2,000 volumes.

The museum, under the care of the curator, Prof. M. L. Seymour, presents an attractive appearance. Prof. Seymour spends the entire afternoon of each day in museum work. In the marine case, the fishes and lower marine life of the Pacific Coast are well represented, and arrangements are being made to effect exchanges with Eastern colleges and high schools.

As a gift from the Academy of Sciences, the herbarium received an addition of forty-eight specimens collected from the flora of Southern and Lower California.

The Oölogical case contains, at the present time, one hundred and twelve specimens presented to the school by the sons of Rev. Mr. Graham. This collection will soon be sufficiently enlarged by varieties of Eastern birds' eggs to complete one-half the case.

The skeleton of the well-known race-horse, Blackbird, lately owned by D. M. Reaves, has been prepared in the bone-house and will soon be set up in its case.

President Pierce has ordered a collection of various specimens from the Sandwich Islands, which will soon arrive.

The teachers are receiving calls from all parts of the State, to lecture at county institutes. The first week in November, Principal Pierce spoke to the institute of Sutter county; Thanksgiving week, Prof. Ritter, Prof. of Mathematics, and Prof. Seymour, Prof. of Natural Science, responded to a call from Tehama county, while Prof. Wilson, Prof. of Psychology, and assistant teacher of Science, spoke before the Sacramento institute, and Miss Parmeter, Principal of the Training school, spent two days at San Bernardino. The first week in December, Mrs. Pierce, teacher of English, was on the program to address the El Dorado county teachers, but being unable to attend, Prof. Pierce appeared for her.

The Normal Lecture Course is a new feature of this year's work. It is an organized effort of the teachers and students of the school to establish a system, by means of which the best lecturers may be obtained, and that at the least possible expense. The course opened in November with two lectures by Dr. Nourse on "Dr. Jekyll and Mr. Hyde" and "John and Jonathan." These will be followed by others at intervals of two or three weeks, throughout the winter. Much is to be hoped from this plan, and if it continues successful it will probably become a permanent organization. V—V.



Read the ad. of prize essay offered.

A HAPPY NEW YEAR to the readers of the JOURNAL! With a deeper insight, and a wider outlook, let the watchword of the year in educational lines be "Forward!"

SUPT. ALLEN is busy with the work of the Educational Exhibit. The time for preparation of exhibit has been extended to March 15. No time should be lost by teachers and Superintendents.

ASSEMBLYMAN GOULD, speaker elect, was, if we remember correctly, a member of the Committee on Education in the Legislature two years ago. He is a forcible speaker, often rising to genuine eloquence; an unwearying advocate, a tireless opponent. His advancement has been rapid but deserved. He can be relied upon as a friend of the schools.

WE have held for some time two well written contributions to the JOURNAL. One by W. T. Bray, Los Angeles, on the State series, and the third reader in particular. The other by Edward Hyatt of San Jacinto, on High School legislation. The first we will be pleased to quote from or use entire as occasion may present. The second has been amply covered by the legislation proposed by the Superintendents at their recent convention.

THE State Association meeting at Fresno has gone with the year. Owing to the serious illness of his wife, the editor of the JOURNAL could not attend. A report of the proceedings may be looked for in the February number. It was no doubt a great meeting in many respects. The officers elect for this year are: President, Supt. T. J. Kirk of Fresno; Vice-Presidents, Mrs. F. McG. Martin, Supt. of Sonoma County, and Geo. Goodell, Supt. of San Joaquin; Secretary, (third election) Supt. J. P. Greeley, of Orange County; Treasurer, (second election) Geo. Merrill, San Francisco; Railroad Secretary, Supt. S. T. Black, Ventura. A good corps of officers. Place of meeting, Stockton.

WE give place in this number to an article on Pensions, etc., by an old contributor. Mr. Drake is nothing if not original. We have published several articles favorable to the pensioning of teachers, although not sure that the proposition is grounded in right, or sound in policy. But we have a high regard for the many noble women who are advocating the measure with the best of motives and with a zeal that will not fail to compel admiration though it fail to convince. We have therefore always felt ready to give them a hearing, and shall await the introduction of their Bill with keen interest, for it is possible that it may be so drawn as to win unlooked-for friends.

WE would call attention to the full page ad. of the Pacific Excursion Company. The officers are well known and reputable men, and can be depended upon to do as they propose. They live right here in California and will take pride in making Pacific Coast excursionists comfortable. The excursion to the World's Fair, to be conducted by the editor of the JOURNAL, will make the round trip over the railroad lines, (Canadian and Rio Grande and Denver,) along which this Company have secured accommodations that will add to the pleasure of the trip. Large religious and educational organizations have, through the proper officers, already signified their intention to take advantage of the facilities offered by the Company. Address the Secretary of Company, or the editor of the JOURNAL, if you desire to accompany the party conducted by the latter.

Watchwords for the New Year.

I do not say be rich;
For the poor are as fortunate as the rich—
(Perhaps more fortunate).
I do not say, Be great;
But do your work and strive to be unknown:
In the large eyes of Time all men are dust.

Therefore my summons is a cry to arms:
Join your unfettered youth
To a holy cause, unfriended, spit-on, jeered.
Lead the forlorn hope:
The God's voice calls you to the black gulf—
(Hark, where the bugles wander and cry on the cliffs!)
Go down and let your sword's fire light the way.

Of all things beautiful and good,
Thou art the king, brave brotherhood;
For thou wilt bring again to Earth
Her long lost Poesy and Mirth;
And till thou comest, men are slaves,
And travel downward to the dust of graves.

Clear the way, then, clear the way;
Blind creeds and kings have had their day;
Break the dead branches from the path:
Our hope is in the aftermath:
To this event the ages ran:
Make way for Brotherhood—make way for Man.

—CHARLES EDWIN MARKHAM, *In Oakland Tribune.*

Ring out a watchword for the year,
And let it echo far and near,
From vale and lake and mountain side;
OUR FLAG, OUR FAITH, OUR FIRESIDE!

Thus do we hail thee, ninety-three,
From Eastern to the Western sea,
And honor pledge, whate're betide,
TO FLAG, TO FAITH AND FIRESIDE!

Now end the bitter feuds of old,
The hate of man, the love of gold;
And toil and wealth in peace abide
FOR FLAG, FOR FAITH AND FIRESIDE!

No chieftain's "slogan" follow we,
No regal "motto" bends our knee;
Be this our all sufficient pride:
ONE FLAG, ONE FAITH, ONE FIRESIDE!

Let party watchwords sound no more,
And wars of factions now be o'er;
But true as steel let us abide
BY FLAG, BY FAITH AND FIRESIDE!

To ninety-three we pass the word
That brings us all in sweet accord;
And brand them traitors who deride
OUR FLAG, OUR FAITH, OUR FIRESIDE!

GEO. E. LOOMIS, *In S. F. Examiner.*

Correspondence.

We have received substantially the following:

LINCOLN, Dec, '92.

DEAR EDITOR.—Whose business is it to take the steps toward declaring a district lapsed?

Ans. The Trustees should know the attendance at the school. Having this knowlege, State Supt. Anderson says, it is their duty to inform the County Superintendent, who must withhold apportionment of money to the district, and inform the Board of Supervisors.

LIBERTY SCHOOL DISTRICT, LAKEPORT, LAKE COUNTY, CAL.

P. M. FISHER:

Dear Sir: Who is the unseen playmate, spoken of on page 138,

lesson 57, California Second Reader. After being carefully studied by a school of 26, all grades, I received the following answers: 4 wind; 10, God; 1, contentment; 6, happiness; 1, an angel; 3, sun; 1, love.

I would like to see the same printed, together with a satisfactory answer. Respectfully, HOWARD.

ANS.—No *satisfactory answer* at hand. Only Ommiscience and the author know who is meant. Several school principals have been interviewed on the point by the editor, and, while not altogether satisfied with the answers of your pupils, they can themselves do no better. The careful study of the matter by your class has done them good. That they differ does them credit.

DEAR EDITOR.—I wish to bring you some of my perplexities, hoping that through your columns you may help me and other teachers similarly perplexed.

1. In an ungraded school how shall I prevent the older boys from imposing upon the younger ones? My school is small, about sixteen. There are not enough older boys to play many games, so they are thrown more with the younger children. The oldest class of boys is about fourteen, not quite old enough to be manly. They are not bad boys,—(all from good homes), but they impose upon the little boys, throw them down, tear their clothes, and intimidate them. If I question the older boys, they tell me that the smaller boys call them names and bother them. Any complaint on the part of the little boys is denominated "tattling," and they are still more ill-treated. *Talking* is of no avail. I have tried to show them the cowardice and unmanliness of the thing. Now, how shall I *act?*

2. How would you handle two boys about fourteen, who persist in being disorderly in school, talking across the aisle, shuffling their feet, tying strings onto the boy in front of them, and otherwise occupying their spare time to the discomfort of the school? Talking to them makes them very repentant for fully five minutes. I have already talked to the school too much. I have spoken to them so many times in school they pay little attention to it.

I hope you may throw us the silken clew to this labyrinth.—E.

ANS.—(1.) Confine the smaller boys to a certain portion of the playground. For a time be found out doors yourself. Make separation the penalty for unfair treatment.

(2.) You have by your own confession talked too much. Accustomed to your oral reproofs with nothing back of them, offenders would

probably as soon hear your voice as not. So seat them that there will be little or no temptation or inducement for them to continue the practice.

This failing, having set the matter plainly before them, without any further ado punish them corporally, either before the school or in the hall as from your knowledge of them may promise to be most effective. Having done this do not "nag" them, but keep on the alert. A firm, resolute demeanor will be most salutary.

Concert Recitation.

Whene'er we breathe a good long breath,
Like this,—like this,—
Then every lung cell openeth,
While quickly the red blood nourisheth,
And all the youg life flourisheth
In healthful bliss.

Whene'er we strike a sturdy blow,
Now here,—now there,—
My muscles ever stronger grow,
My heart beats fuller, and I know
That every vigorous stroke will show,
We do and dare.

Whene'er we use each willing thought,
And head and heart
Combine to do whate'er they ought.
While all their honest task is wrought
Obedient to the lesson taught,
To act their part,—

Each grows a stronger, better child,
With every day;
Each body, mind and soul beguiled
To health and truth, and virtue mild,
To live in goodness undefiled,
In wisdom's ways.

MRS. L. P. HOPKINS, in *Public School.*



Official Department

J. W. ANDERSON, - - - - - - Superintendent Public Instruction
A. B. ANDERSON, - - - - - Deputy Superintendent Public Instruction

OWING to the illness of Superintendent Anderson, he has been unable to furnish copy for this department. Full reports may be expected in the February JOURNAL.

Who Will Go?

The committee on the San Francisco *Examiner's* offer to send twenty bright pupils of the highest grammar grade in the public schools to Chicago, recommended that the examinations be held in May, at some convenient place in each senatorial district. As there are forty such districts, adjoining territory having two senators will have one pupil representative at the Fair. State Superintendent Anderson is to supervise the final selection.

The Greatest Growth.

The year of greatest growth with boys is the seventeenth; in girls, the fourteenth. While girls reach the full height in the fifteenth year, they acquire the full weight at the age of twenty. Boys are stronger than girls from birth to the eleventh year; then girls become superior physically to the seventeenth year, when the tables are again turned and remain so. From November to April children grow very little and gain no weight; from April to July they gain in height, but lose in weight, and from July to November they increase greatly in weight, but not in height.—*British Medical Monthly.*

CALIFORNIA SCHOOL ITEMS.

EX-SUPT. BAILEY is the new County Clerk of Contra Costa.

THE Livermore Union High School building will cost about $10,000.

SEE our Prize Offer for the best essay—5000 pages choice literature.

THE Siskiyou Supervisors, on the third ballot, located the High School at Yreka.

Prof. Phipps, of the Oakdale High School, has resigned and returned to his home in Indiana.

THE Yolo County High School has been located at Woodland. This school is most favorably situated, and we expect it to take high rank.

Five new school houses have been built in Butte County during the year. The Oroville building, cost $15,000; Palermo, $10,000; Central House, $1500; Fairview, $600.

VICE-PRINCIPAL HICKMAN, of Monterey, takes the place of Principal J. T. Stockdale who resigned. Miss Fanny B. Orton, of Oakland, is the new Vice-Principal.

JUDGE BUCKLES, of the Superior Court of Solano County, has decided against the plaintiffs in the action to have Armijo High School District declared to have no legal existance.

THE Shasta County Supervisors, after being in session five days, and taking a number of ballots on location of High School, adjourned for the term. On the 8th and last ballot, Shasta received 2 votes: Redding 1; Anderson 1 and Cottonwood 1.

A FINE site has been purchased for the Siskiyou County High School in Yreka. The tract selected contains about 6 acres, convenient to centre of town and commands a fine view. The Union High School at Etna Mills, same county, opened Dec. 6, with 16 pupils.

AT the recent election Miss Mullen was elected Superintendent of schools in Plumas county. Mr. D. C. Reed holds as appointee of the Supervisors. The question now arises, does the appointment of Mr. Reed hold for the remainder of the term to which Mr. Foss had been elected? The County Government Bill and the Code seem to be in conflict on this point.

SCHOOL people will be interested in the following official figures of the result of the recent election on the questions indicated: Educational Qualification for Suffrage—For, 151,320; Against, 41,069. Refund the debt—Yes, 79,900; No, 85,604.



MARTIN KELLOGG,
President University of California.

THE

PACIFIC EDUCATIONAL JOURNAL.

Official Organ of the Department of Public Instruction of alifor nia.

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CURRENT EDUCATIONAL THOUGHT.

THIS incessant change of place among teachers; this constant small talk between parents and their children; this difficulty of securing men and women fitted for the place; this easy disadjustment of those chosen, taken with the struggle to influence school boards in their choice of teacher; this double-dealing in the electing of school Trustees, and ten thousand other perplexing things that constantly arise, all sufficiently unite their voices to attest that the teacher's vocation is one of great and unavoidable difficulty.—REV. A. M. RUSSELL before the Glenn County Institute.

ANY one who compels attention has some secret power. Any one who dares to speak right out has the earnestness of conviction. People who cannot answer unwelcome truth generally try to stifle it. Truth cannot be muzzled. Power cannot crush truth. Truth in rags will ultimately triumph over power in purple and fine linen.—MRS. SARAH B. COOPER.

KEEP the children away from the contaminating influences of hardened criminals and teach them to use their hands and brains in honest labor.—DR. WALTER LINDLEY, Superintendent of the Whittier School.

WHILE here I shall do all in my power to aid the public schools of the commonwealth.—HON. T. C. FORD, of Nevada City, in the California Senate.

A MAN can have no nobler ancestry than men and women who have worked for a living. There is no greater blessing for a young man in this country than to be thrown upon his own resources.—DR. JORDAN, at State Teachers' Association in Fresno.

GENERAL DEPARTMENT

Examinations and Promotions in California.

A Report read before the Council of Education at Fresno, December 27th, 1892.

BY WILL S. MONROE, PALO ALTO, CAL.

The subject of examinations and promotions was so generally discussed at the meeting of the California Teachers' Association held at Riverside, December, 1891, that it commended itself to the Council of Education; and at the meeting held at Oakland in September, the writer was appointed Chairman of the Committee to report on the question at the December meeting. Of those appointed to act with him in the preparation of this report, Mr. Edw. T. Pierce was designated to secure the opinions of normal school principals in the United States, and Mr. J. W. McClymonds to address letters to the leading City Superintendents, and secure the practices and opinions thereof.

The special bearing of the question on California was reserved for the writer. Mr. Pierce and Mr. McClymonds will each make individual reports to the Council, and what follows is my study of local conditions obtained by means of extensive correspondence with Superintendents and teachers.

The report is the summarization of these letters, including as it does every section of the State, as well as all the varied conditions under which educational work is carried on.

Replies to inquiries were received as follows:

County Superintendents	30
Members of County Boards of Education	9
City Superintendents of Schools	17
Principals of Schools	19
Teachers in High Schools	35
Teachers of Grammar Schools	123
Teachers of Primary Schools	149
Teachers of mixed Schools	72
In all	454

The first inquiry relates to the methods practiced in the State in determining fitness for promotion.

The second seeks to ascertain the opinions of Superintendents and teachers as to the proper basis of promotion, and thus determine the approximation of theories and practices.

The third inquiry has to do with person or persons who pass judgment upon the fitness of pupils for promotion.

The fourth inquiry touches the intervals of promotion, and the fifth gives returns of cities where examinations have been employed as a basis of promotion, together with the opinions of Superintendents and teachers.

HOW PROMOTIONS ARE MADE.

Desiring to know the practices in the different counties of the State, I sent letters of inquiry to all the County Superintendents in which I asked the following questions:

1. How is the fitness of pupils for promotion determined in your county? By written examinations, teachers' estimate, or class-standing—in

a. Primary (1st, 2nd, 3d, and 4th year) grades.

b. Grammar (5th, 6th, 7th, and 8th year) grades.

c. High School (9th, 10th, 11th, and 12th year) grades.

2. If written examinations are used to determine fitness for promotions:

a. How often do they occur?

b. By whom are the questions prepared?

c. By whom are the pupils' papers graded?

d. Does County Board of Education revise the papers?

Thirty County Superintendents replied. Twenty-four reported that written examinations were held in their respective counties as the basis for promotion; four reported that promotions were made on teachers' estimates, and two on class-standings.

In eighteen counties the questions are prepared by the County Board of Education; in four counties they are prepared by the teachers. In thirteen counties the papers are graded by the County Board of Education; in nine counties they are graded by the teachers, but in six of these counties papers are revised by the County Board of Education. In three counties only, the papers are not revised after they have been graded by the teachers.

The rules and regulations governing these written examinations for promotion differ little in the various counties. I give those prescribed in two counties of the State. The first reads:

RULES

Governing annual examinations of the pupils of the public schools of —— county adopted by the Board of Education.

1. The teacher of each school or each department in graded schools, is hereby constituted examiner of said school or department, and will be held responsible for the faithful discharge of said duty.

2. The questions will be forwarded to each teacher, or principal of graded school, securely sealed, and must not be opened until the time for the examination to begin, and then in presence of the class.

3. Teachers must give pupils a fair and impartial examination, and must grade the papers, marking the standing of each question on the left margin and total credits in upper left hand corner.

4. Each teacher will be allowed two weeks in which to grade papers and forward them to County Superintendent.

5. Each pupil is expected to answer the questions without explanation from the teacher, or any assistance whatever; and the papers of any pupil who does not comply with the above requirements must be rejected by the teacher.

6. All pupils must begin a given subject at the same time, and no pupil must be excused from the room until the questions written on the board have been answered, and the papers handed in.

7. Pupils of the same grade must occupy separate seats or desks during examinations.

8. All papers must be legibly written in ink. Map drawing may be executed with lead pencil.

9. Pupils must answer in complete sentences as far as possible.

10. Use legal cap paper if possible.

11. Pupils should leave a margin on the left side of paper.

12. Report the grade to which every pupil belongs. Do not rank a pupil who takes only a part of the examination.

13. Pupils who are in two or more grades should be given the questions of the lowest grade only.

14. Put the average grade the pupil receives in this examination in the "Average" column.

15. Return the printed questions with the papers to the Superintendent of Schools.

16. When the teacher has completed the record, he will fill out and sign the following certificate.

I, ——-, teacher of —— District, —— County, Cal., do hereby certify that I have not permitted any one to obtain a knowledge of the questions before they were submitted to the classes; that I have conducted the examination in all respects in conformity with the above rules; that I have given no assistance to pupils, directly or indirectly, in answering the questions, nor permitted anyone else to do so; that to the best of my ability I have graded all papers impartially and correctly, and that the record herewith returned is a true statement of the results of the examination.

Signed ————,

Teacher ———— District.

NOTES.

(1.) Do not let the pupils fold their papers.

(2.) In mental arithmetic, the pupil should let his pen lie on the desk while the teacher reads the question. After ample time has been given the pupils to solve the problem, let the teacher say, "Write." Then let the pupils write the answer "only," and number it to correspond with the number of the question.

(3.) Conduct the examination throughout as much like a teachers' examination as practicable.

The second reads

RULES FOR EXAMINATION OF PUPILS IN —— COUNTY SCHOOLS.

1. An annual examination of pupils for graduation, and for promotion in the several grade divisions, shall be held in all the schools of —— county, beginning on the first Monday of June and continuing one week.

2. Such examinations shall be uniform, and the questions for classes in the Grammar Grades and for the highest division of the Primary Grade, shall be prepared by this Board. Examination questions of the lower divisions of Primary Grade shall be prepared by teachers; but examination in lower classes shall be chiefly oral.

3. Sets of the printed questions, together with a schedule of the standards required in the different studies, shall be sent to each teacher in the county having charge of a school. Sealed envelopes containing the prescribed questions shall be opened by teachers, in the presence of their schools, for the first time upon the day the examination begins.

4. It is hereby made the duties of teachers to conduct such examinations, to mark the papers of pupils, and to enter upon the schedule the standing of each pupil in each study he has pursued during the school term.

5. The order of studies shall be as arranged on the schedule, and the general directions for conducting the examinations, sent to teachers, must be strictly observed.

6. Examinations shall be conducted partly in writing and in part orally. A record shall be made of both oral and written work, which record, with the written papers of pupils, shall be reviewed by the Board while in session at the County Seat.

7. Pupils not present at the beginning of an examination shall not be afterwards admitted.

8. All members of a class must begin a subject in the written examination at the same time, and no recess shall be allowed until that subject is finished.

9. The marked papers of such pupils as attain 75 per cent. in the examination, together with a general record, including the schedule of credits earned by each pupil in the examination, shall be sent by teachers to the County Superintendent of Schools within two weeks from the close of the examination.

10. Failure of any teacher to comply with the requirements of the foregoing rules and regulations shall be deemed sufficient cause for the Board to declare such teacher guilty of unprofessional conduct.

11. The Board shall meet at the call of the Secretary to prepare questions as provided in Rule 2 of this series.

12. Diplomas of graduation shall be awarded to pupils that have completed the course of study, for Grammar Grades, if they attain 75 per cent. in examination.

13. A pupil, upon changing his place of attending school, shall apply for and receive from the teacher of the school he last attended, a certificate stating the grade and division to which he belongs. Such certificate shall entitle the pupil to enter the same grade and division in any school in this county. Blanks for this purpose will be furnished by the Superintendent of Schools.

14. A pupil having no record in the —— county schools, who applies for admission, shall be examined by the Principal of the school where application is made, and the Principal shall grade such pupil until the next county examination.

15. Where circumstances render it impossible to hold the regular examination as prescribed in Rule 1, an examination shall be held during the opening week of the next succeeding term, or as soon thereafter as practicable. Such examination shall be conducted or directed by the County Superintendent of Schools, and may be either oral or written, or both, at the discretion of the Superintendent.

By order of County Board of Education.

And now let us see how the County Superintendents themselves regard this system of promotion. Superintendent Robert Furlong, of Marin County, writes:

Upon the whole, experience has taught me that the "Teachers' Estimate" plan is not a safe basis for promotion. "Class Record of Standings" is still more objectionable. Notwithstanding all that has been said against written examinations, I believe *that* method *the best* to ascertain the power or fitness of pupils for more advanced work. Five years' experience with this system in Marin County Schools has established it in favor with teachers, Board of Education and this office.

Superintendent G. W. Beattie, of San Bernardino County, writes:

All promotions are made on the recommendations of the teachers who have had the pupils under their care. After trying the plan for three years, of examining pupils for graduation from the grammar schools, on questions prepared by the County Board of Education, that method was abandoned, and the County Manual issued this year contains the following, adopted by a unanimous vote of the Board.

"The *right* to promotion is earned the instant a pupil proves his *power to do the work of the grade next higher*. No one is better able to judge this power than the teacher, who daily presents new work for his mastery."

Superintendent B. F. Howard, of Sacramento County, writes:

While there are many and valid objections to promotion on examinations, yet I believe in them for the following reasons: They stimulate both teacher and pupil to better and more systematic work; they secure better organization and classification; they establish a standard for promotion and graduation, and fix a responsibility not resting alone with the teacher. In my opinion the results of promotions and graduations based on annual examinations have been very satisfactory and warrant continuance.

Superintendent L. J. Chipman, of Santa Clara County, writes:

We give the teacher the post of honor in the matter of promotions, believing that he is of necessity better qualified to judge of the pupil's intellectual development, capacity for study, physical condition, etc., than the County Board, the Principal or any other individual or body of individuals.

Superintendent C. B. Webster, of Solano County, writes:

If it be possible to arrive at the result sought in any less cumbersome manner, and to remove some of the heart-aches which written examinations have caused the "flesh" to inherit, I would be decidedly an advocate thereof. I believe the teacher is the best judge. Let the examinations be decreased as much as possible and let the class-standing count for much, is what I prefer to the present system. Examinations are a curse, but as long as we are cursed with inefficient teachers we needs must be "cursed" with them.

THE BASIS OF PROMOTIONS.

County Superintendents, members of County Boards of Education, Principals of schools and teachers were asked to express their opinion on the following question: What should be the basis of promotions, written examinations, teachers' estimates, or class-standings? Twenty-six County Superintendents, nine members of County Boards, and three hundred and seventy-nine teachers replied as follows:

Basis of Promotion.	County Superintendents	Members of County Boards of Examination	Principals of Schools	Teachers	Total
In favor of written examinations	18	7	9	68	102
In favor of teachers' estimates	8	2	9	257	276
In favor of class-standings	0	0	1	54	55
Number reporting	26	9	19	379	433

Of the County Superintendents reporting, 69 per cent. believe that the written examination should be the basis of promotion, while 31 per cent. express a preference for teachers' estimates; 78 per cent. of those representing County Boards favor written examination, and 22 per cent. teachers' estimates; 47 per cent. of the Principals of schools favor written examinations, and the same per cent. teachers' estimates. Only 18 per cent. of the *teachers* reporting favor written examinations as a basis of promotion, while 68 per cent. believe that the teachers' estimates should be the basis.

The three hundred and seventy-nine teachers reporting represented Humboldt, Colusa, Sonoma, Santa Barbara, Monterey, San Joaquin, San Francisco, Alameda, Stanislaus, Los Angeles, Santa Cruz, San Diego, Tulare, and Orange Counties, and include teachers in mixed, primary, grammar, and High Schools as follows:

BASIS OF PROMOTION.	Teachers in Mixed Schools	Teachers in Primary Schools	Teachers in Grammar Schools	Teachers in High Schools	Total
In favor of written examination	8	14	28	18	68
In favor of teachers' estimates	57	113	76	11	257
In favor of class-standings	7	22	19	6	54
Number reporting	72	149	123	35	379

In the grammar grades, where the examinations chiefly affect the teachers, 23 per cent. believe that the written examinations should be the basis of promotion; and 62 per cent. believe that the estimates of teachers should be the basis.

James D. Graham, Supervising Principal of the Schools of Pasadena, writes:

Written examinations are necessary. (1) As a stimulus to both teacher and pupil. (2) To maintain a uniform standard in the schools of the city or county. (3) To correct the personal equation of error in the teachers' estimate. (4) They form something tangible to show cause for promotion or not of pupils.

Caspar W. Hodson, Principal of the Lincoln School, Pasadena, writes:

Promotions should always be made, in primary and grammar grades, upon the basis of the teacher's estimate of the pupils' ability or power to do the work of the next grade. To promote on the basis of either oral examinations, written examinations or class recitation marks, alone, would be absurd. I do not believe any teacher can do real teaching and keep daily recitation marks.

WHO SHOULD MAKE PROMOTIONS.

The reply to the question "By whom should promotions be made —by teachers, Principals of Schools, or County Boards of Education?" are as follows:

In Favor of Promotions Being Made.	County Superintendents	Members of County Boards of Education	Principals of Schools	Teachers	Total
By the teachers	10	3	10	291	314
By the Principals of schools	0	0	8	59	67
By the County Boards of Education	16	6	1	29	52
	26	9	19	379	433

38 per cent. of the County Superintendents, 33 per cent. of the members of County Boards, 53 per cent. of the Principals of Schools and 77 per cent. of the teachers believe that promotions should be made by the teachers; while 62 per cent. of the county Superintendents, 67 per cent. of the members of County Boards, 5 per cent. of the Principals of Schools, and 8 per cent. of the teachers regard the County Boards of Education as the proper promoting power.

A County Superintendent writes:

In this county we found that by relying on the teachers the result was far from satisfactory, classes being promoted wholesale, because of the pressure from parents, which, it seemed, the teachers could not withstand. I, therefore, prevailed upon the Board to adopt our present plan.

A teacher writes:

Promotions should be made by the teacher.

(*a*) It is a very natural conclusion that the one best qualified should be the judge. (*b*) Qualification for promotion is co-ordinate with that for teaching. It is the resultant of the year's forces. (*c*) *Ability to do* should be the basis of promotion, no one knows this better than the teacher. (*d*) When Principal or County Board promotes, the pupil is rated upon per cent., a most unjust method, for it does not speak fairly of the pupil's ability. We should rise to the higher plane, that a boy should be rated according to quality; even woolen goods are so rated. Texture and fibre are the points. (*e*) I believe in trusting teachers with this work, for they will rise to the importance of their work. I regard the present sy tem of some counties, by which promotion is made by County Boards, as an unwarranted assumption of authority, and as tying the schools down to a routine, unjust and wrong.

Miss Jean Parker, Principal of the Broadway Grammar School, San Francisco, writes:

No person or committee should presume to pass upon a child's right or fitness to go forward, except those who have had opportunity to note his daily struggles and growth in power to overcome difficulties. For the past twelve years the promotions in this school have been made upon the teachers' judgment as to the best interest of the child.

Superintendent J. W. Linscott, of Santa Cruz County, writes:

When the millennium comes and we have perfect teachers or rather teachers possessed of good sense and judgment, then and not till then will we be able to successfully place the question of promotions in their hands.

Mr. James G. Kennedy, Principal of the Franklin Grammar School, San Francisco, writes:

I am in favor of promoting pupils on the recommendation of the teacher. The teacher, by means of his daily association, is peculiarly qualified to decide the pupil's fitness to enter upon the higher work. This method develops individual child study, the key to all good teaching.

I am opposed to written examinations as a means of determining the child's fitness for promotion; first, because it destroys individual child study; second, it does not test the child's ability to do the higher work; third, it is barbarous as well as dangerous to subject children to a severe physical and mental strain at the close of a hard year's work.

HOW OFTEN PROMOTIONS ARE MADE.

The reply to the inquiry "How often are pupils promoted?" from cities are as follows:

Alameda: Semi-annually.

Berkeley: Semi-annually.

Fresno: Annually, and at other times upon judgment of the teacher and Superintendent.

Los Angeles: Semi-annually.

Pasadena: Annually.

Pomona: Annually, and whenever ready.

Riverside: Annually.

Sacramento: Annually.

Salinas: Annually.

Santa Ana: Twice or thrice a year, as case demands.

Santa Barbara: Annually (which is all wrong.)

San Diego: Annually, or at any time when ready.

San Francisco: Annually.

San Jose: Annually, but if arrangements could be made, should prefer semi-annually.

Santa Rosa: Annually, but promotions may be made at any time by the principal when recommended by the teacher.

Stockton: Annually, but pupils may be promoted at any time if prepared to do the work of the next higher grade.

Twelve of the seventeen towns reporting, make promotions annually; four semi-annually. Sixteen County Superintendents report an-

nual promotions; seven report semi-annual promotions; one reports that promotions are made every six weeks; and two report that promotions are made at any time. While 70 per cent. of the towns and 80 per cent. of the counties reporting, make promotions but once a year, the numerous protests received indicate that not a few of the teachers of the State believe that pupils should be promoted whenever they are ready for the work of the next higher grade. Dr. O. P. Jenkins, professor of physiology in the Leland Stanford Junior University, and at one time connected with the public schools of California, says in this connection:

The system which includes promotion in the public schools but once a year, or even but twice in the year, is a very pernicious one. This practice works an injury to the great majority of the pupils. It is utterly impossible to keep a group of children, under varying conditions of mental activity, home surroundings, and opportunities, together in one set of studies for the year, without keeping back many who could easily advance, or crowding forward many who are thus made to do overwork. The pupils to whom such a course is adapted, must, from the nature of the case, be a small minority of the whole class. The selection of a definite time, once a year, is a perfectly arbitrary one, based on one reason, and one alone,—that is, the convenience of the teachers. A pupil should be advanced from one class to another at *any* time, when, in the judgment of the teacher and the Principal of the school, that pupil could work better in the advanced class.

I know all the objections that would be raised to such a system of promotion, but the objections are in every case only connected with the easy administration of the school, and whether they are serious or not, it is the business of the teachers to meet them by solution of the objections themselves, and not by an escape from them by the adoption of an arbitrary system of administration to the injury of the pupils, for whom alone the school exists. In the same way, those who are not fitted, on account of ability or other reason, to work in the class in which they are, should be transferred to the lower class *at the time* when that lack of ability is discovered.

To hold a pupil for a year, or a good part of a year, in a class in which he is working to a disadvantage, for the reason that he could work better in an advanced class, or in a lower class, is one of the most serious evils, in my opinion, of our present school system. The seriousness of the evil is aggravated from the fact that there is no good reason for its existence.

Advancing from one class to another, or dropping back a class, ought to occur without so much ceremony, just as we pass from one subject to another, as, for example, from "Addition" to "Subtraction."

The lines between different grades in the same school are wholly artificial lines, imaginary one might say, and the maintaining these with so much ceremony distorts the meaning of work, and puts a greater strain on the school, where little or none should exist.

Mr. Geo. W. Beattie, Superintendent of the schools of San Bernardino County, says:

The right to promotion is earned the instant a pupil proves his power to do the work of the grade next higher.

TRIAL OF WRITTEN EXAMINATIONS.

To the question "Have written examinations been tried and found to be a satisfactory basis of promotion in your schools," I received the following replies from City Superintendents of Schools.

Alameda, D. J. Sullivan: Written examinations have been tried and have not been found satisfactory.

Fresno, T. L. Heaton: Written examinations, as the *sole* basis of promotion, I believe is a species of barbarism not to be found in the schools of California.

Los Angeles, W. M. Friesner: No.

Oakland, J. W. McClymonds: They have been tried and found not satisfactory.

Pasadena, J. D. Graham: Combined with teachers' estimate in doubtful cases, they are satisfactory.

Pomona, F. A. Molyneaux: We have not yet found any way to secure as many good results as by the examination.

Riverside, Eli F. Brown: Written examinations are all right if properly managed.

Sacramento, Albert Hart: Yes, some years since, and found to be unsatisfactory.

Salinas, W. H. Housh: Only in promotions *to* and *in* the High School.

Santa Ana, G. W. McGinnis: They have been tried extensively, but results have not been satisfactory.

Santa Barbara, Geo. E. Knepper: Written examinations have been thoroughly tried and found wanting as a basis of promotion.

San Francisco, John Swett: Official written examinations were in vogue for twenty-five years. At present abolished as unsatisfactory.

San Jose, F. P. Russell: Examinations count one-half; standings through the year count for balance.

Santa Rosa, I. P. Crawford: They have, and are very *un*satisfactory.

Stockton, James A. Barr: Written examinations have always been used in our schools until the last two years.

The San Bernardino County Board of Education, in the manual for 1892, says: "The County Board of Education will accept the recommendation of the teachers as a basis for all promotion and graduations, hoping thereby to encourage teaching for the power that comes

from culture. Let the standard be; 'Not what a pupil knows, but what he can do because of what he is.' "

Mr. Chas. H. Keyes, Superintendent of Schools of Riverside, in his annual report for 1891, says: "In all grades there has been great difficulty in attaining the condition (relieving pupils from an intense and undue expenditure of nervous energy, in freeing teachers from interminable drudgery with examination papers) because of the County Board examination which stood at the end of the eighth grade. Teachers would keep in mind both the quality and quantity of this examination. The fact that at the end of the grammar course, boys and girls must stand an examination in from thirteen to sixteen subjects at the hands of a board, who, although highly intelligent, were by force of circumstances necessarily unacquainted with the teachers and their teaching, did much to cripple the work in all grades, and especially in the highest."

Mr. J. W. Anderson, Superintendent of Schools of San Francisco, in his report for 1890, says: "The system of promotion and graduation of pupils recommended by the Superintendent in 1887, and adopted by the Board of Education, has proved to be a success; so much so that there will be no danger of the Department again resorting to the effete system of written examinations. The most prominent cities of the country now make very little account of written examinations. It is to be hoped that the time is near when they will in all places be relegated to the shades."

GENERALIZATIONS.

With these facts and opinions, what generalizations may be drawn?

1. That the teachers and County Superintendents are at variance as to the educational value of county examinations as a basis of promotion, 69 per cent. of the County Superintendents and but 22 per cent. of the teachers favoring the present system. The arguments presented show that written examinations are not accurate tests of power, and that they are condemned by the teachers generally because of the use made of them.

2. That the teachers and the Superintendents are at variance as to the proper promoting power, 62 per cent. of the County Superintendents and less than 8 per cent. of the teachers favoring promotions by County Boards through examinations held by them. The teacher being nearer the child and knowing his capabilities must certainly know better than even the professional examiner the extent and limitations of the child's power.

3. That the intervals of promotion are unnecessarily long, and that strong and weak pupils alike suffer in consequence.

RECOMMENDATIONS.

1. That a comparative study based on the experience of leading educators shows that written examinations, as a means of determining the fitness of pupils for promotion from grade to grade in the public schools, are believed to be inadequate, and that promotions can most safely and wisely be made upon the teachers' estimates.

2. That the Council hereby disapproves of the practice of written examinations as a basis of promotion and recommends to all teachers and Superintendents such immediate and energetic agitation of this question as will result in the abolition of the examination system.

Teachers' Pensions.

BY AGNES M. MANNING, S. F.

Does the State owe it to the teacher to provide a pension for old age? The State has made a vast monopoly of the teachers' business in establishing free schools. No one can compete against a powerful commonwealth, that not only provides free instruction for the masses, but takes care that this instruction shall be of the best.

Only one man in California has heretofore attempted this competition, and it will take the most of Ex-Governor Stanford's millions to carry his purpose to success.

Every civilized country recognizes the duty of pensioning its teachers. Why should ours be the exception? Are republics to be classed always as ungrateful? What is there in a free government that does not coincide with the just reward of its old and faithful employees? Our country throws its shield of protection around the declining years of its higher judges, of its soldiers and sailors. Are they of any more vital importance to her welfare than the army of teachers who guide and direct her whole population. The teacher can truthfully say to the State, "Shut up your free schools, and lo! like the touch of a magic wand, my profession will become more remunerative than law or medicine."

It is of far higher importance to the public weal than either, and ranks next to the ministry. Shut up free schools, and the prizes of life that so often fall to the lawyers and doctors, who stand high in

their profession, would also fall to the teachers who stood high in theirs.

This however, would eventuate in the rich obtaining all the culture, and the poor being compelled to go without. Every statesman knows that wholesale ignorance in the matter, would endanger the welfare of the country. If men are free they must be educated, else are we in danger of such reigns of terror as the French Revolution.

Wisely has the Nation established her free Schools. They are her best bulwarks against danger, her best hopes for present peace and future progress. Why then, should she discriminate against the earnest worker that makes this safety and progress possible for her!

Teachers have to give long years of study to fit themselves for their duties. Theirs is a peculiar work that totally unfits them for any other vocation.

It is so exhausting, so nerve and brain wearing, that its numbers are constantly dropping by the wayside, prematurely worn out and broken down in health.

There is a fiction in Society, that women who work have only themselves to support. There are very few teachers who do not divide their small salaries with others.

There is always some member in the family that is poor, and to the poor generally come the most children.

Is it the rich member of a family that helps the poor one, is it not rather, the single aunt, whose slender purse is always open for whoever belonging to her is poorer than herself?

The aunt and the elder sister, are they not the true props of many a drooping household?

How many professional men, and men who have risen in life, owe their education to the self-denial and self-sacrificing affection of such aunts and sisters?

In Germany a teacher is not only paid a good salary, in the ratio of salaries in Germany, but he is given a pension that is increased according to the number of years he has served, until he receives full pay after he has taught fifty years.

Experts are agreed as to the efficiency of the German schools.

The true reason is, that all anxiety is removed from the financial path of the teachers. He knows that his is a life position, and that a good provision will be made for his old age.

The State should pension the teachers for the benefit of the child-

ren. She owes to the young, the best ability, and it is not to be secured without adequate compensation.

Has it not come down to us through the ages that "The laborer is worthy of his hire?"

The bar, medicines, the banks, brokers and newspaper businesses have all been filled with men, who have been drawn away from teaching, because it promised only a meager return for present work, and nothing for the future.

They could not afford to spend their talents and a profession they loved, but that did not pay them. The children of the country lost incalculable benefits by their withdrawal.

Hitherto, women have had scarcely any other avenue than teaching open to them for intellectual work.

This explains why one finds so many more women of talent in our schools, than men. This, however, thanks to the higher civilization, that is demanding the higher education for women, cannot long continue. New pursuits are being opened every day, and larger emoluments will induce them as well as their brothers, to abandon ill-paid nerve and strength-wearing work, no matter how much they may love it.

We know the hypocrisy that preaches to the tired teacher that this love should be her chief and only reward. This cant about the low aims of pecuniary benefits, come from men, who, like the Harpies in Virgil, wish to flap off others from the feast, which they themselves are anxious to secure.

A Suggestion to Teachers.

If teachers mean by examination
To show the scholars' information,
Why do they carefully seek out
Such difficult things to ask about?

These are the questions, as a rule,
The teachers ask us in our school:
"What's the time in the Congo State
When Persian clocks are striking eight?"
"Halve the square of seventy-three,
And what will a tenth of sixteen be?"
"What was the reason Charlemagne
Sent his great-grandaunt to Spain?"

" Explain what came of the Gothic war,
And what the Turks were fighting for
When Venice conquered Charles Martel,
And ancient Constantinople fell."
" Name the products of Peru,
And all the rulers of Timbuctoo."
" Point out the errors in the words,
' Green cheese ain't not made of curds ; '
' Him was not the friend of he ; '
' He hadn't ought to written me.' "

Now, for instance, we'll suppose;
They wish to show what a fellow knows ;
Then they'll be glad of a few suggestions
As to a set of *useful* questions.
" What did one Columbus do
In October, 1492? "
" Will some bright scholar kindly say
Which is ' Independence Day ' ? "
" What little girl will be so candid
As to tell us when the pilgrims landed? "
" The war of 1812, my dear,
Was fought in what particular year? "
" Kindly tell us, if you will,
What nations fought at Bunker Hill? "
" Who cut down a cherry-tree,
And helped to make a nation free? "
" Name a certain English queen
Who still upon her throne is seen."

If teachers only had the tact
To hit upon the proper fact,
Recitations then would be
More creditable to them and me.

—*T. J., in January St. Nicholas.*

METHODS AND AIDS.

A Study of Children's Interests.

EARL BARNES.

The object of this paper is to find what qualities of objects most interest children of different ages. We have come, during the past few years, to base much of our teaching on a study of the common objects that surround children in their homes or in their out-of-door life. Elementary science occupies a prominent place in all our courses of study in the public schools, and our lessons in reading, number, language and drawing are based on a study of concrete things. In studying objects with very young children we generally attend to their color, form, size, material, and arrangement of parts. In doing this are we following the natural lines of the child's development? Are we moving along his own native lines of interest?

Of course it may be said that in education we must follow, not the child's natural lines of interest, but a line laid down by philosophy, theology, or our own views concerning the aim of life; but, even admitting that the natural tendencies of humanity are wrong, and must constantly be corrected by some theory, it still holds true that to make an effective start at any moment we must know where the child is at that moment, and even if we are not to follow his natural tendency, it will help us greatly to know what the natural tendency is, even if we wish to overcome it. So for the philosophical, as well as the scientific student of pedagogy, the question is one of first importance.

In the *Revue Philosophique* for December, 1890, appeared an article by Alfred Binet on "*Perception L'Enfant*," in which he described experiments on his two little girls, one two and a half and the other four and a half years old.

He asked them what they meant by common words, such as horse, clock, and bottle, and wrote down exactly what they answered. After a month or six weeks he repeated the same list; and after some fifteen such experiments he collated the results. Judging from their answers to these questions, their greatest interest in these common objects lay

in their use, and, in the second place, in their movements. They almost never described an object by telling its color, form, size, material, or structure. They gave, not its qualities, but what it was good for, and what it could do.

It seemed to me that this might prove a very instructive study for teachers, especially if we could compare children of different ages, so as to trace the lines of development as the old interests change or new ones appear.

At an institute in Monterey County the teachers expressed a willingness to assist me in gathering the data, and so through the kindness of Superintendent Wood the following circular was sent out:

OFFICE OF THE COUNTY SUPERINTENDENT,
SALINAS CITY, October 7, 1892.

To the Teachers of Monterey County:

At our late Institute, some of you expressed a willingness to assist Prof. Earl Barnes in collecting children's definitions of common objects, in order to see what qualities or attributes of such objects most forcibly impress their minds, and are presumably most attractive to them at different ages. Such a study will throw light on the way in which elementary science works, and possibly other studies can be most easily and profitably taken up in the different grades.

It would assist much in reaching these conclusions, if you would, the day after receiving this circular letter, provide all the children in your room with paper and pencil, at the composition or spelling hour, and read them the following directions as an exercise in written work.

Write at the head of your sheet the name of your teacher, your own name and your age. What is a

knife,	mamma,	earthworm,
bread,	potatoes,	shoes,
doll,	bottle,	finger,
water,	flower,	clock,
armchair,	snail,	house,
hat,	mouth,	wolf,
garden,	lamp,	omnibus,
piece of sugar,	bird,	balloon,
thread,	dog,	village,
horse,	carriage,	box,
table,	pencil,	handkerchief.

Please give no other directions. Do not ask the children to define horse, or to tell what the horse can do, what he is like, or anything of the sort, as such questions will suggest to them other ideas than those which naturally arise on hearing the word horse. Please do not tell the children what is to be done with the work, and do not ask them to be careful, as we wish their spontaneous, off-hand work.

Gather up the papers and forward to this office, with any generalizations or suggestions that they may give you. These papers are in no sense an examination

of your work, and they are not to be considered at all from the point of view of spelling or grammar. They will be forwarded to the educational department of the Leland Stanford Jr. University, where the data will be generalized and the result printed in the February number of the *Pacific Educational Journal.*

Adapted from the work of Alfred Binet in the *Revue Philosophique* for December, 1890.

JOB WOOD, JR.,
County Superintendent of Schools.

Returns were sent in from more than two thousand children, and the papers of fifty boys and fifty girls of each age, from six to fifteen inclusive, were taken on which to base our generalization. Thus the work of one thousand children was collated, the papers being taken just as they came, good, bad, and indifferent. The work was partly done by students in the department, but the results were all gone over by myself and one other person, so as to give uniformity.

An examination of the papers showed that the answers could be grouped under the following general heads: *Use*,—a clock is to tell the time; *larger term*,—a clock is a time-piece; *action*,—a clock goes tick-tack; *quality*,—a clock is pretty; *place*,—a clock is on the wall; *color*,—a clock is yellow; *form*,—a clock is round; *structure*,—a clock has a face and wheels; *substance*,—a clock is made of wood and iron.

Often a single answer would give several attributes of the object, as for example: A knife is a tool made of iron having a blade and handle, and is used to cut bread. The several statements of this definition were collated under larger term, substance, structure, and use. Each entry was made so as to show whether the definition was single, two-parted, three-parted, or four-parted. In all 37,136 statements were collated.

Before giving the results of the study it may be well to consider some of the objections which naturally arise concerning the validity of results to be reached from such data. In the first place, it may be said that in studying such data we are dealing with freaks that cannot be reduced to quantitative expressions. An examination of the charts here printed, and of the numerical table, will show that these data yield to mathematical statement as readily as do physiological processes or data on sociological or economic development.

Again it may be claimed that young children will give the definitions that come within the range of their vocabulary, and that this limitation will prevent their showing the real lines of their interest. But this objection vanishes if it is remembered that children learn their vocabulary along the lines of their greatest interests, naturally picking

up the names of things and actions in which they are most interested. It may also be said that since children are taught definitions in the school we can get no spontaneous expressions from them. But the fact is that in the Monterey schools there is little formal defining done, and, in the data collated, there is great individuality shown, though the children follow certain definite lines determined by age and not by schools. Again, it may be thought that the words were badly chosen in that they give little opportunity for the expression of color, and possibly of some other qualities. It would certainly be possible to select a better list, but Binet's list was used that we might compare our results with his. The list is besides varied, and gives abundant chance for expressing form, substance, structure, quality, place and motion; it also gives a chance to study the treatment of unfamiliar terms, and while the words are common they are not particularly utilitarian. It was desirable in this preliminary study to use only concrete terms.

The following chart shows the results with the children seven, eleven and fifteen-years-old. In looking at the chart of seven year olds, one is struck with the preponderance of the definition of use. Children at that age consider that they have told you all about an object when they tell you what it is good for. A horse is to ride, a mamma is to take care of children and a box is to put things in. To the young child all things exist to meet some of his own particular wants, thus: "a village is to buy candy in; a bird is to make meat with, or is good to lay little eggs; a dog is good to catch flies; a mamma is good to cook, or to whip little children and a wolf is good to get its hide." One boy says, "a steam-boat is good to go up and down Monterey bay for children to look at."

A very few young children give some larger term, as, "a dog is an animal, or a house is a building," but the classifying instinct does not seem to be strong in them at this time.

A few children give actions or tell what a thing can do, as, "a dog runs; an earth-worm flies around the earth; or a omnibus will eat you." Scarcely any of these children say anything about the substance, structure, form, color or general qualities of objects. Of course, the children know something about these attributes of the objects and much could be drawn from them by skillful questioning, but we are here interested in what comes first to light when their minds are left free to act.

Omnibus, balloon, snail and earth-worm are sometimes unfamiliar,

but the children generally try them just the same. Even common words sometimes draw out very absurd answers, showing that with children as with adults who are learning a new language, a good deal of the work with words is simply guess work, thus children say: "a omnibus is good to eat; a lamp is good to milk; village is a small shanty; a snail is a little snow flake; a balloon is boards."

There is a strong tendency among the children at this age to adopt a certain form of words, that is suggested to their minds in the first answer, and carry it along, simply modifying it for subsequent words, thus, "a knife is made of iron; bread is made of flour; a doll is made of wax; etc.," but, however, the child of this age starts he is sure to get around to "a —— is good for ——" as his general form.

With the eleven-year-old children use still leads, but is less extended than before; larger term has grown out into respectable proportions; while substance has become very important, and structure, action, quality and place are gaining considerable prominence.

In the fifteen-year-old chart larger term leads, use comes second, action is insignificant, while the other attributes are many of them important, substance easily leading.

With the children of all ages substance and structure are hard to express, thus, "shoes is a piece of skin sewed up; box is a piece of wood sewed up square; a box is a kindy big woody thing; a bottle is a hole with glass around it." Of course, after eleven years old such examples are rare, but definitions of substance and structure remain, naturally, the most difficult definitions to give.

If one examines the table he finds a gradual change developing from year to year. Dealing with these common objects the young children attend almost exclusively to their uses; gradually they become interested in classifying them into larger groups, and in noticing their qualities. At fifteen they have about the same proportion existing between use definitions and larger term definitions as we find in Webster, but the qualities are still much less developed.

In other words the little children are primarily interested in the common objects of the world because of what they can be used for or what they can do, only later in life do they become actively interested in the qualities of objects and then only gradually. Among these other attributes they are first interested in movements, then in what the thing is made of, and then in the parts of which it is made.

As would be naturally expected the definitions become broader and contain more statements as the children become older. Thus the

seven-year-old children give 2,902 statements; the eleven-year-old give 3,599 and the fifteen-year-old give 4,646. The increase is not perfectly uniform from year to year. The fact that most of the six-year-old papers were written out by the teachers from the children's dictation, may account for the fullness of their statements, since the papers written by seven and eight-year-old, often omit words, and these omissions are not taken into account in making up the table. The fourteenth year may mark a period of retarded intellectual development.

It is interesting to note the difference between the boys and girls throughout the study. Considering that the papers are taken at random from all over the county it seems at first surprising that the diagrams are so similar; but a moment's study shows that the differences are all in one direction. In all the essential lines of definition the girls lead the boys; that is to say, they give more statements about the objects than the boys do, and these differences are most marked in the lines of discrimination which show highest intelligence. Does this mean that they are better observers, or more studious, or that they have better powers of expression? If one examines the table he finds that in the column at the right marked "total" the girl's number, the lower one in each square, is generally superior to the boy's. In all, the five hundred girls give 18,979 statements, while the five hundred boys give but 18,136.

Now admitting that these tests really show the children's natural lines of interest and that the work has been accurately done, what do the results teach us concerning educational work?

In the first place they show that children's interests develop according to pretty definite laws which can be determined and used as a basis on which to build educational activity. It is possible, in other words, to establish a course of instruction for the average seven-year-old children of Monterey county when we have made sufficiently extended studies in a sufficient number of directions, which will rest on as scientific a basis as our treatment of typhoid fever with such children now does.

In the second place they show that our natural history and other object lessons with primary children, if they are to appeal to their interest, must at least start with the uses of objects, gradually lead out through what the things can do and what they are made of, to their structure, form, color, etc. In work with objects we generally start out with the superficial qualities, taking what Agassiz found to be true of college boys and applying it directly to primary children. We

take an apple and say, what is this? What is it covered with? What is on this end? What shape is it? What color is it, etc., etc.? Our study seems to indicate that if we are to follow the child's natural bent we should start with a discussion of what the apple is good for. Our new readers start out with: an apple is round like a ball; this study seems to say that it would be better to start with: the apple is good to eat, or the apple grows on a tree.

Whether one accepts the theory that each individual lives over the history of the race or not it is still interesting to note that in Homer or Herodotus one finds this same tendency to dwell on movement, use and substance.

In the third place the study shows that with young children we must not expect elaborate conceptions of the things about them. One or two of the, to them, most striking attributes of an object are sufficient to identify and describe it.

In the fourth place the study shows that in knowledge of common objects, and in ability to express what they know, the girls of Monterey county are in no way inferior to their brothers.

In addition to these general conclusions there are many questions which are raised by the study, but which are unanswered.

How would the returns from city children compare with these data which come mainly from country children? Does the small number of statements given in the fourteenth year mark a period of retarded intellectual development in that year similar to the periods observed in physical development? If one could carry this study along with an anthropometric study on a considerable body of children would it not throw light on the debated question whether periods of retarded physical development are also periods of retarded intellectual development?

Superintendent Greenwood has shown that the girls of Kansas city are superior to the boys in height and weight from the twelfth to the fifteenth year; after that the boys again lead the girls. Would this study show a similar intellectual movement if carried out with older children? How far does the tendency to define by giving general terms indicate a development in the use of comparison? It would also be interesting to carry out the study with a list of abstract words.

Upper line, Boys.

CHART ILLUSTRATING USE OF DIFFERENT DEFINITIONS.

Lower line, Girls.

CHILDREN 7 YEARS OLD.

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CHILDREN 11 YEARS OLD.

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CHILDREN 15 YEARS OLD.

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NUMBER OF STATEMENTS GIVEN BY 1000 CHILDREN.

Upper number, boys. Lower number, girls.

	6 yrs.	7 yrs.	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.	13 yrs.	14 yrs.	15 yrs.	Total.
Use	1246	865	989	997	984	797	819	756	841	747	9041
	1238	962	1155	1083	984	780	946	825	724	676	9373
Larger Term	42	108	120	222	167	282	334	494	496	811	3076
	54	111	91	163	250	423	348	573	561	952	3529
Action	72	101	85	67	70	88	73	57	71	51	735
	18	127	118	74	85	72	75	106	72	47	794
Quality	30	55	83	38	33	109	98	87	95	70	698
	28	24	37	60	37	119	73	211	96	68	753
Place	6	27	36	46	64	86	103	132	78	97	675
	2	13	53	43	85	105	132	127	119	71	750
Color	14	37	5	12	9	9	5	7	12	17	127
	6	7	11	13	3	8	5	8	17	5	83
Form	6	9	8	22	12	39	33	55	62	68	314
	2	23	25	12	18	30	28	88	44	74	344
Structure	18	20	26	53	48	64	137	150	150	141	807
	18	20	35	33	63	78	92	180	167	157	843
Substance	26	49	67	137	126	181	227	271	171	251	1506
	32	22	72	66	125	184	218	273	233	261	1489
Unclassified	148	151	89	51	167	88	229	166	27	62	1178
	134	171	91	82	118	57	123	119	109	20	1924
Total	3140	2902	3199	3274	3448	3599	4098	4685	4145	4646	37136

The Flag.

EDITOR OF JOURNAL:—In the JOURNAL for January, I have read with much pleasure and satisfation the recommendation by Mr. Hyde, of the San Francisco Board of Education, which reads as follows: "That every class in our public schools should be provided with an American flag, to be placed, as an honor and a privilege, in the custody of the pupil having the best record in scholarship and deportment."

The satisfaction to us in reading this recommendation, coming, as it does, from so eminent a source, is the greater, since we claim to be the first to have put the idea to a practical test—the idea being also original.

Since Columbus Day the flags have been carried, and the effect is a success far beyond our highest expectations.

I had often and for many years wondered why the flag was never thus introduced into the class-room, so I approached our trustees on the subject. They speedily granted my request that the innovation be made in our school, the flags were purchased, and Columbus Day was fixed as the date upon which those pupils who had attained the highest general average for the four weeks previous should be surprised by being presented with the little silk flags.

This was done, and simultaneously with the raising of our new flag upon the school building by members of the Grand Army, the banners were placed in the hands of the head pupils for the month. At each assembly the eleven color-bearers come to the office, and receive the flags from the principal. They then "fall in" at command, and march down to their places at the head of their respective classes already formed in line in the school yard. Upon arriving at their rooms, the color-bearer, when all are seated, places the staff in the rings provided for it near the teacher's desk, when it is constantly before the eyes of the pupils and can be seen through the transom by any one in the halls.

The result is that there has been a marked improvement, and an increase in the number of pupils who strive to reach the first place and the general average of class marks has been raised. Those who reach 90 per cent. are placed on the honor roll, and act as the color-guard, the color-bearer being in command. I join most heartily and enthusiastically in the suggestion of Mr. Hyde, and would most earnestly recommend that all schools of California follow our example in putting the stars and stripes to this use, and place the flag in the hands of the *first* pupil, as a mark of honor and a reward for his industry and proficiency, and that it be carried by the successful one for at least one month during good conduct. The standard bearer thus appears as an example for his fellow-pupils, for, if at any time the bearer is guilty of conduct or any act that reflects discredit upon the flag during *his* month, it is taken from him and passed to the most worthy.

The adoption of this plan by all the schools would be a most fitting sequel to the lessons of love for country and devotion to the flag —which were so thoroughly reviewed on that great day of patriotic demonstration, the 21st of October, 1892. The association of the flag with high attainments, and making it a synonym of truth, fidelity, industry and worth will lead to a higher respect for it than could, in my opinion, be reached in any other way, and the principles thus im-

pressed upon the sensitive young minds of our schools remain there purer and more lasting than all the patriotic literature of our land, or the study of the lives of our great men could make them.

I think, therefore, that, if you would bring this matter before the teachers of the State through your JOURNAL, or otherwise, and urge the adoption of this plan, you would do a great service, not only to the young generation of the present, but to all posterity and our country at large.

Trusting that I do not intrude upon your time and hoping that you will take the matter up, I remain,

J. MERCER PATTON,
Principal Livermore Public School.

Experiments Without Apparatus.

Waves.—A rope stretched tightly across the room, with weights suspended from cords tied to the rope at equal distances, furnishes a very excellent illustration of waves and the undulatory theory. The cause of the waves in the ocean is thus explained.

Friction, percussion and compression, as agents evolving heat, are illustrated by lighting matches; explode with a hammer on an anvil, torpedoes made of sulphur and chlorate of potash, and by triturating a few crystals of sulphur and chlorate of potash in a mortar.

Expansion by Heat.—Take an iron or brass ring, through which a ball will nearly pass but not quite. Heat the ring. The ball will now pass through without difficulty. Metals expand by heat, because the vibrations or undulations of the atoms are caused to take place in greater orbits, enlarging the whole in consequence.

Color.—That color is not in the object, but simply an effect of the undulations of the waves of light, is shown by dissolving a crystal of sulphate of iron, green vitriol, in water. The solution is nearly white. Add a few drops of tincture of galls, which is made by boiling oak bark, and the whole will turn black. The chemical action causes the change.

Blue Inks.—The blue ink used for writing purposes is made by dissolving a small piece of Prussian blue in soft water. It is done thus: A piece of Prussian blue, the size of a pea, is dropped into an ounce bottle of water, and a few crystals of oxalic acid added to dissolve the blue. Care must be taken not to use too much of the acid, or the ink will destroy the paper. If a deeper blue is desired, add another chunk of Prussian blue.

Another Solution of Problem No. 57, p. 261, California State Arithmetic.

$1.4641x5000=$7320.50, amount in 4 years at 10 per cent. compound interest if all payments were deferred till the last one.

If paid according to the conditions of the problem, there would be no interest on the first payment, interest for 1 year on the second, for 2 years on the third, for 3 years on the fourth, and for 4 years on the fifth. The $7320.50 contains all the five payments and interest on each of them for 4 years; hence, to get the correct result, we must discount the first payment for 4 years, the second for 3 years, the third for 2 years, and the fourth for 1 year.

$1.00 1.10 1.21 1.331 1.4641	Amounts of $1.00 in 0, 1, 2, 3, and 4 years respectively, at 10 per cent. compound interest.
$6.1051	

To divide $7320.50 by their sum, $6.1051, divides it into the five payments, and, at the same time, discounts first, second, third and and fourth payments as required.

$7320.50÷$6.1051=1199.07×.

M. B. BAKER, Sutter Co., Cal.

How to Teach the Little Ones to Read as They Talk.

The conversation lesson is the most effectual means I have found for securing this great end. The lesson may be conducted in several different ways. One way that I have used very successfully is to draw a picture on the board that will interest the pupils. This will not be difficult, for children are very easily interested in a picture, especially if it is drawn by their teacher. A pretty painting or engraving may be used occasionally instead of the drawing. Write a conversation about the picture upon the board. Write the different parts of the conversation in different colored crayon, and assign to each child a certain color. Or if you find it convenient, write the conversation for two or three pupils only, and divide your class into several divisions, letting each division take its turn. If there are new words in the lesson, call attention to them before commencing the lesson. A few well-directed questions will interest the children in the picture, and then

they will want to talk about it, and *talk* they will when they read their parts from the board. If, on account of timidity, the children do not enter into the conversation with enough animation, it is well for the teacher to take part.

Another good way is to give each child a flower or fruit. Let one child ask a question about it and the next answer. When you have gone around the class once or twice in this way, have the questions and answers read in the same way that they were given at first. I find a few such lessons very successful in impressing upon the minds of the little ones that *reading* is *talking*. A. McL.

Brother Jonathan.

It seems strange to speak of the United States as "Brother Jonathan," and the wonder is how it ever began; but on inquiring into the matter we find that the custom arose from an ordinary remark made by General Washington at the beginning of the Revolutionary war. On going to Massachusetts to organize the army, he found it scant of ammunition and all means of defense; and no one could suggest any way out of the difficulty. Something must be done at once for the public safety, and General Washington, who had great confidence in the judgment of Governor Jonathan Trumbull of Connecticut, said in this dilemma, "We must consult 'Brother Jonathan' on the subject." "Brother Jonathan" was equal to the occasion, and supplied many of the lacking necessities; and afterwards during the war it became the custom in any emergency to say, "We must consult Brother Jonathan." In time the name became applied to the whole country, and it is pleasant to know that the great Washington himself was the originator of it.

THE floating flower that met Columbus' eye
Told of the unknown land that lay anigh.
E'en so love's blossom drifting on life's wave
Tells of the unknown land beyond the grave.

—*Sanda Enos.*

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

A Biennial Convention Echo.

FROM AN EDITORIAL IN THE "ONTARIO RECORD" ON "PROPOSED SCHOOL LEGISLATION."

Our present law in this matter (of granting certificates) is peculiar. A State normal diploma from any State may be honored by a county board with a certificate; but the graduate of Harvard, Yale, Cornell, or Michigan must be put to the inconvenience of an examination. No matter how small the State normal school, no matter how meagre its course, no matter how low its standard of scholarship, its graduates are, under our State laws, given the precedence over the graduates of the best colleges in the country. It may be said that the normal school gives a special training for the teachers' work, but our best educators always prefer a teacher who has had a college training without a normal training to one who has only had the normal education. Undoubtedly the best combination is a college course supplemented by a normal course in methods.

We have a high opinion of our State University, and of the modern educational Minerva, Stanford, but even their strongest partisans will not presume to rank them higher than Yale, Harvard, Cornell, Princeton, University of Michigan, Johns Hopkins, or a number of other Eastern institutions. And in the educational circles of the country degrees from such old-fashioned New England colleges as Amherst, Bowdoin, Brown, Dartmouth, Williams and Wesleyan are recognized as a guarantee of thorough training and good scholarship fully equal to the parchments of the two great universities of our own State. We might mention others in the far East and middle West where the curriculum is equally rigid and the standard of scholarship equally high. Now, is it liberal, is it logical, even to deny the graduates of these institutions privileges in the matter of certificates, which we freely, and we might say indiscriminately give the graduates of Berkeley.

We hold examinations only twice a year, and both times come when the Eastern teacher is as a rule engaged in school work. Unless he holds a State life diploma or equivalent credentials—and several States grant no such credentials—he must cross the continent and be examined in June or December if he wants to accept a place here. This condition often prevents securing valuable specialists for high school work. With the development of our high school system we are reaching a stage where we want the best teachers we can get, no matter where they come from. And our laws should facilitate, not hinder, this desirable end.

The State Teachers' Association.

FRESNO MEETING, Dec. 27-30.

The twenty-sixth annual session was opened in Barton Opera House, December 27th, at 7:30 P. M., President Hugh J. Baldwin, of National City, presiding. After an invocation by Rev. Mr. Mather, Hon. Geo. E. Church greeted the Association with a warm welcome on behalf of the "City of Destiny" which he declared felt honored by the teachers' presence. State Superintendent J. W. Anderson made a dignified and becoming response for the teachers. The annual address of the president followed. It showed careful preparation, was vigorous, suggestive, and received generous applause.

WEDNESDAY.

The general sessions were held in the afternoon, the morning being devoted to the work of the three departments, Grammar and Primary, Normal and High School, and Supervision.

In the first-named department, E. P. Rowell, president, Chas. E. Hutton of Los Angeles read a fine paper on "The Scope and Purpose of the Grammar School." D. A. Mobley of Stockton read a paper on "The Relation of the Teacher to the Public." The prevailing thought was that "The hand that guides the child rules the world." Thomas D. Wood of Palo Alto read a practical paper on "School Hygiene."

In the department of High School, Melville Dozier presiding, David S. Jordan of Stanford, Martin Kellogg of the State University, J. B. McChesney of Oakland, and Miss C. A. Packard of Los Angeles discussed "The Mutual Relation of the High School and the University."

In the department of Supervision, W. W. Seaman presiding, the subject of "County Supervision" was presented by Fanny McG. Martin

of Sonoma; "Written Examinations," by A. E. Baker, Los Angeles; "Teachers' Examinations," by Eli F. Brown, Riverside.

In the general session Joseph Le Conte of the State University spoke on "Some Points of Contrast Between Organic and Human Evolution;" Alice J. Merritt of Los Angeles on "California as a field for teaching Elementary Botany;" Fernando Sanford, of Stanford, on "Science Teaching in High Schools." Officers for 1893 were elected, and reports of standing committees were received.

The evening reception and banquet tendered by the Fresno teachers was all that could be desired. Six hundred persons sat at the tables in the charmingly decorated hall, and the "Queen City of the Interior" justified her title in her royal hospitality."

THURSDAY.

MORNING.

Grammar and Primary Department. —A strong paper on the "Mission of Our Common Schools," by Charles E. Hutton, Los Angeles Normal School; a thoughtful essay on "The Shadows of Our Profession," by George D. Ostrom, Santa Barbara; "The Duration and Vitality of Our Common School Course of Study," Joseph O'Connor, San Francisco.

Normal and High School Department.—"The Relations of the Normal Schools to the High Schools and University" was discussed by Elmer E. Brown, State University; S. D. Waterman, Berkeley; Earl Barnes of Stanford; E. T. Pierce, Chico; and Rose V. Winterburn, San Diego.

Supervision.—"Practical Education: What is It?" by Charles H. Keyes, Pasadena; "City Course of Study," Madison Babcock, San Francisco.

General Session.—A masterly report on "The Needed American Education," Hamilton Wallace, Grass Valley; "The Relative Value of Subjects," Washington Wilson, Chico Normal School; "The Study of Systematic Pedagogy," Elmer E. Brown, State University. The evening lecture on "Education," by the Hon. D. M. Delmas of San Francisco had no smack of the shop about it, was breezy, liberal, and the teachers appreciated it.

FRIDAY.

Grammar and Primary Department. —"Literature Below the High School," by Charles E. Markham, Oakland. "The Kindergarten as an Educational Factor," by Mrs. Sarah B. Cooper, San Francisco. A discussion of the kindergarten without Mrs. Cooper is Hamlet without

the Dane. "The Question of the Course of Study," Herbert Miller, Marysville.

Normal and High Schools.—"Essentials of High School Courses," by M. B. Anderson of Stanford and E. E. Lange of the State. "Normal School Diplomas and Teachers' Certificates," Ira More, Los Angeles, and State Superintendent J. W. Anderson.

Supervision.—"Powers Needed by a City Superintendent," T. L. Heaton, Fresno; "Do Visits of Inspection Have a Permanent Value?" S. T. Black, Ventura.

General Session.—"Poetry and Modern Life," Melville B. Anderson of Stanford. "The Law Should Require Local Boards to Recognize Normal School Diplomas of California," George R. Kleeberger, San Jose Normal. "The Christian College in the System of Education," C. G. Baldwin, Pomona.

Reports.—Adjournment to meet in Stockton a year hence.

Officers for 1893: President, T. J. Kirk, Fresno; vice-presidents, Fanny McG. Martin, Santa Rosa, and George Goodell, Stockton; secretary, J. R. Greeley, Santa Ana; railroad secretary, S. T. Black, Ventura; treasurer, George A. Merrill, San Francisco.

Department of Grammar and Primary Schools.—President, G. G. Grant, Stockton; vice-president, F. M. Lane, Fresno; secretary, J. S. Moulton, Stockton.

Department of Normal and High Schools.—President, George R. Kleeberger, San Jose; vice-president, Robert F. Pennell, Stockton; secretary, Margaret E. Shallenberger, San Jose.

The Educational Council filled its three vacancies by the election of William Friesner, Los Angeles, F. A. Molyneaux, Pomona, and Elmer E. Brown, State University.

GLEANINGS.

FROM THE FLOOR.

PRESIDENT BALDWIN.—We are organized that we may be more useful to this great commonwealth. * * The Bankers' Association at its recent meeting in San Francisco thought our vocation of sufficient importance to call forth an able address on the necessity of high schools devoted to instruction in business. * * The railroad officials should treat our association with the same consideration that they show political conventions. * * The chairs of Pedagogics in our universities should be so equipped as to enable them to shed an effulgence of light, illuminating the State from end to end, thereby enabling us to see more clearly our line of march. * * Each County Board holds itself master of a principality over which no teacher can pass without being subjected to humiliating tests and possible denials. This is demoralizing.

HON. D. M. DELMAS.—Education is the science of life. It is learning how to live well, how to protect and preserve all the functions of man. True education must begin, not by degrading, but by elevating the body.

THOMAS D. WOOD.—Cooked air is not healthy. Light should come to the pupil from the left. Desks should be adjustable to the wants of the eye.

DAVID STARR JORDAN.—If you cannot get an education in four years take ten years. The world will wait for you and keep a place for you. Make your system of education such that a great man may be formed by it, and the great man will appear. A college education will pay from a financial standpoint; but the educated man does not look upon his learning as valuable only from the amount of money he can make out of it. It increases patriotism, hope, courage, manhood. The grand free school system of the United States is working its way into every corner.

SARAH B. COOPER.—The child must learn to use his mental faculties as he learns to use his limbs. The world does not need fine rhetoric half as much as it needs practical, useful ideas. San Quentin is filled with convicts who have not had the slightest education along the line of hand labor.

FROM THE BANQUET.

Let our actions, rather than our words, prove our desire to entertain you.—Superintendent KIRK.

I admit that women are foolish, but God made them so to match the men.—FANNY MCG. MARTIN.

The California school ma'am is the richest plant the State possesses. It re turns the surest income.—CHARLES H. ALLEN.

The teachers of this State are as a general thing twenty per cent. better than those of the Eastern States from which we all came.—J. W. ANDERSON.

Less than twenty years ago desolation was on these plains. Now Fresno, "the Convention City," is the third shipping point in the State.—T. C. WHITE.

Los Angeles, the hub of the south, from which we furnish many good fellows, such as governors and United States senators.—W. M. FRIESNER.

There is only one Golden Gate, and Oakland sits fronting it.—J. B. MCCHESNEY.

Oakland sits fronting the Golden Gate, but you must go to Berkeley to see it.—MARTIN KELLOGG.

Palo Alto has taught Berkeley how to play football.—DAVID STARR JORDAN.

We have at hand the inspiration for a literature of which we may be proud.—HORR WAGNER.

This marks the high water line of all receptions.—F. M. CAMPBELL.

The souvenir reception program is a marvel of taste and ingenuity.—THE GUESTS.

FROM THE CORRIDORS.

Teachers do not like to prepare exhibits. Yet many of the Fresno county schools made most commendable exhibits, and the county will be represented in exhibit work at Chicago. Wallace's address was superb, and should be published in full. Stockton carried the convention by its vim and unanimity. This meeting will give an impetus to affairs educational all through the San Joaquin valley. The Fresno teachers,—bless them! The teachers should extend a hand to J. C. Pelton, the veteran. The local press was fair and generous. The universities are getting closer to us. We're proud of them both.

County Institutes.

TEHAMA.—Superintendent Belle Miller convened the twenty-first annual session at the Lincoln Grammar School, Red Bluff, on November 21st; P. M. Fisher, Conductor. O. E. Graves was elected Vice-President and J. D. Sweeney, Secretary of the meeting. Miss Edith K. Johnson was chosen as Assistant Secretary.

After the usual preliminaries, Miss Miller read her address which was short and to the point, subject, "The Ideal Teacher." Roll call revealed that but *one* teacher was absent.

During the forenoon, Geometry was presented by O. E. Graves, G. K. Bingham and Misses M. Harvey, Frances Brotherton and Mollie Owens. J. D. Sweeney, H. Gans, H. C. Swain and Miss Margaret Cullen, instructed the institute in History. Mr. E. B. Warmoth read an excellent paper on "The Value of History in the Public Schools." After noon, P. M. Fisher discussed Grammar, and Misses Clinton and Hale Geography. During the evening, a number of teachers and citizens listened to Mr. Fisher's able address, "The Power of an Idea."

On Tuesday, Prof. C. M. Ritter, of Chico, presented Arithmetic in the forenoon and Misses Anna Buckley and Lena Naugle won much praise by their work on Primary Language. Miss Buckley's class of "tots" did excellent work on an entirely original topic, thus showing excellent foundation. Miss Naugle's paper on the subject was well received. Miss S. L. Owens, aided by Clara Walker, Dora Gilmore and L. W. Warmoth were the leaders of the work in Reading. State Superintendent J. W. Anderson was present during the day and addressed the institute briefly. Mrs. Logan, County Superintendent of Shasta county, was also in attendance. On Tuesday evening the teachers in reunion assembled, and listened to an excellent impromptu literary and musical feast.

Miss Fanny Johnston and L. W. Warmoth were appointed a committee to secure funds for the care of the grave of ex-Superintendent Augustine, over which the teachers had placed a monument.

Prof. M. L. Seymour, of Chico, held the attention of the teachers during the forenoon, by his interesting remarks on "Science" and "Entomology." During the afternoon, P. M. Fisher made a brief synopsis of "The Literature to be used in the Public Schools." The Rev. Dr. DuBose addressed the convention upon the "General Literature of the World." Mrs. Halley read a pot-pourri on the High School question.

There were many visitors during the session; the clergy were fully represented. The attendance during the week was excellent, and the interest shown was greater than former years. We noticed many strangers at the meetings. H. H. Banks and Miss S. E. Garwood, who were present, were members of the first institute held in the county. Much interest was displayed in the educational journals of the day.

The plan adopted, of having several leaders for a given subject, instead of one as heretofore, was endorsed. Such meetings as the late institute *are* of value to all. S.

NORMAL SCHOOLS.

San Jose.

STATE NORMAL SCHOOL, Jan. 14, 1893.

Notwithstanding the fact that the standard for admission into the various classes has been greatly raised, the number of new pupils increases with each succeeding term. At present there are 600 pupils enrolled, and the much-needed appropriation is anxiously looked forward to. The Commencement was held on the 27th of January, commencing at 10 A. M. The exercises were conducted in the following order:

1. Passage from the Bible.
   PRAYER.
2. Giving of Diplomas.....By Principal Prof. C. W. Childs.
3. Address.....By Prof. Elmer E. Brown of Berkeley.
4. Response.....By the President of the Class.
5. Class Song.
6. Class Poem.

Songs by the school were interspersed throughout the program. There was no unusual display in dress or arrangement of the classes, but Faculty and pupils assembled in their accustomed places. Several members of the legislature were present. It is the aim of the Normal Faculty to introduce new features into each Commencement program, thus rendering these exercises doubly interesting.

We are getting ready for an extensive exhibit for the World's Fair. Great interest is being manifested by the pupils, and each

teacher is indefatigably working up his special department. One interesting feature in the display will be a variety of objects made from California woods.

Our beloved librarian, Miss Royce, has been seriously ill. She is slowly regaining health and strength in the bracing air of Nevada City. Miss Sprague is acting librarian during her absence. Mrs. Wilson is away on a short leave of absence.

We have listened to two interesting lectures during the past month, one by James Whitcomb Riley, another by Dr. Nourse, on "Dr. Jekyll and Mr. Hyde."

Prof. Melville B. Anderson will deliver the second course of lectures before the University Extension Club. Subject—"Representative Poets of the Ninteenth Century, including the following: Wordsworth—the Poet of Nature. Byron—the Poet of the Political Revolution. Shelley—the Idealist of the Revolution and the Revolutionist of Idealists. Tennyson—the Assertor of Law. Browning—the Vindicator of Personal Freedom. Victor Hugo—the Poet of Humanity. Emerson—the Friend and Aider of Those who Live in the Spirit Lowell—the Ideal Scholar. Matthew Arnold—the Ideal Teacher." The first lecture, "Wordsworth—the Poet of Nature," was delivered in Normal School Hall, Wednesday evening, January 11th.

CISCA.

Principal Childs, in his report to the Board of Trustees, for the term ending January 27, 1893, states that there are now 589 students in the Normal department, and 250 in the Training department. At the rate of increase during the year he estimates the enrollment in the Normal department at the close of the school year, June 1895, at 750.

Los Angeles.

In his report for 1892, Principal More makes the following statement which, in view of the meeting of the Legislature, is suggestive at this time:

At the last meeting of the Board, in December, 1890, you voted to ask the coming Legislature for $10,000, to build a chemical laboratory separate from the present school building, thus enlarging the size of the school by turning the present laboratory-room into a school-room. But our representatives failed to secure anything, though the school at San Jose secured an appropriation for building purposes of $37,000, and that at Chico an appropriation of $25,000 for the same good object.

Thus you will see the growth of the school in numbers is impossible until more room shall be provided, and you may soon be called upon to determine upon

what basis the rejection of those applicants who are fitted for admission to the Junior Class shall be made. The only good result to balance the evil of this state of things is that the standard of admission will be raised, and the scholarship of the school improved.

On another important feature he remarks:

The care of the body has been a marked feature of the work during the past year. The new gymnasium has proved all that its most ardent supporters could wish. Every student spends forty minutes per day in class exercise under a skilled instructor; an hour is also allowed for voluntary exercise. The effect is quite marked already—fresh color and a healthy development are taking the place of wasp waists, morbidly sensitive nerves and a delicate pallor. The classes hereafter sent out will be skilled instructors in physical culture.

The prospects of the school were never brighter, and the single drawback of want of room will, I trust, be promptly remedied by our next Legislature.

Chico.

Chico graduated fifteen students January 20th. Assembly Hall was taxed to its utmost to seat the audience. Prof. Elmer E. Brown, of the State University, delivered the address to the class.

ERRATUM.—In the account of the meeting of the State Teachers' Association, Wednesday, the name of Ida M. Windate, of Fowler, should appear instead of Chas. E. Hutton.

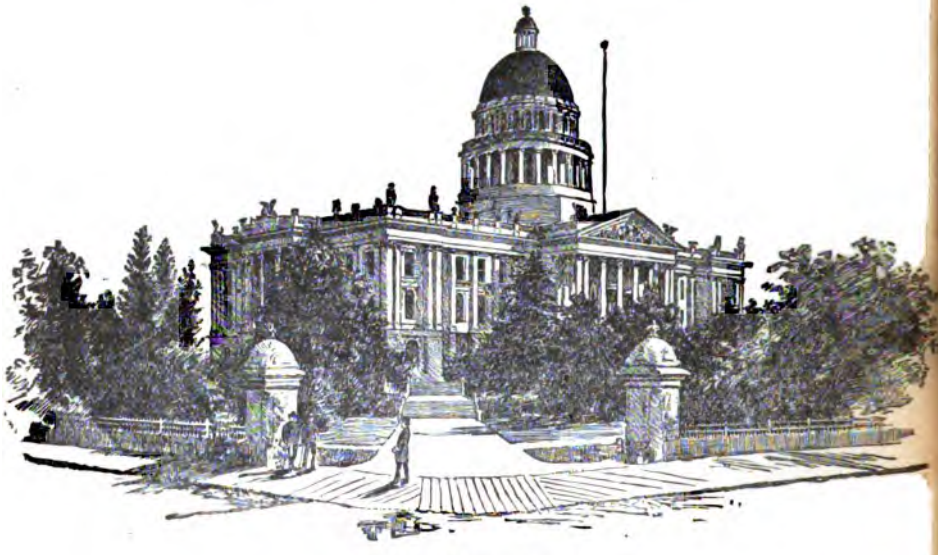
IF you wish a copy of any educational bill now before the Legislature, request the representative of your district to send it to you. Such requests are always courteously met.

WE have been promised for the March number, a High School article by Lillie J. Martin, of the Girls' High School, San Francisco, that will be a valuable contribution. Others along the same line will follow.

STOCKTON sent a delegation 110 strong to the Association meeting at Fresno. The delegation was the strongest at the meeting outside of Fresno county, comprising about one-fourth of the entire membership. All of the prominent teachers from both Stockton and San Joaquin county were present. The teachers were accompanied by City Superintendent Barr, President R. E. Wilhoit and Messrs. Geo. C. Turner and H. C. Holman of the Stockton Board of Education.

The interest manifested by the school authorities and teachers of Stockton in going such a distance, and in such a strong body to attend the meeting is sufficient evidence of the increased interest taken in educational matters in that enterprising city during the past year.

EDITORIAL.



The Legislature of '93.

School officers, teachers and that portion of the general public that concerns itself about the appliances of education will view with interest, amounting to solicitude, the action of our legislators in matters affecting the schools. Careful consideration of bills is almost rendered impossible by the distracting variety of questions presented and the temptation to escape the labor necessary to a wise understanding of all these, by the simple process of swapping votes. This knowledge causes the friends of popular education to be conservative and to pray that their representatives may proceed with caution. In addition to the amendments agreed upon by the Superintendents at the Biennial Convention in December last, which amendments will be embodied in an omnibus bill by Superintendent Anderson, the only three really important measures presented will be Teachers' Pensions, Free Text Books and Woman Suffrage, limited to educational measures and officers. These amendments and measures will be referred to the Committees on Education, the *personnel* of which is as follows:

SENATE.



HART, of Sacramento, *Chairman.*—Senator Elijah C. Hart is thirty-six years of age, a man of family, having four children. As a boy he attended the public schools of Colusa. Learned the trade of printer. Edited for awhile the *Oroville Mercury*. In 1878 founded the Willows *Journal*. Has been the City Attorney of Sacramento for three terms. Two years ago was a candidate in the State Convention for Attorney General, his namesake, W. H. H. Hart, securing the prize. He is a brother of ex-Attorney General, A. F. Hart. His sister-in-law, Miss Vivian, Clerk of the Committee, is well known in Colusa and other counties, as a young woman of more than ordinary literary and artistic ability and a teacher of unquestioned success. Senator Hart is naturally an avowed champion of the State text books and will be vigilant and active in their defense, if opposition appears.

GUY C. EARL, Oakland.—Born on a farm in Tehama county, Matthews, of the Assembly, now living in the house. Graduate of the Oakland High School and State University. A man with an excellent opportunity, starting out as though he would prove himself worthy of it. Is an Attorney and man of family.

TIREY L. FORD, Downieville.—Attorney; native of Missouri; in California sixteen years; took a High School course in Paris, Mo.; District Attorney of Sierra county four years. Upon being interviewed he bluntly said, "I am for anything that will help the public schools."

NOBLE MARTIN, Dutch Flat.—Native of Vermont; "graduated in an old log school-house in Chatauqua county, New York;" taught one term in New York; came west in '53; served in Legislature in '73-4, '75-6, '91; has a daughter, a graduate of the Oakland High School, who has taught five years.

R. B. CARPENTER, Los Angeles.—Native of Vermont; received an academic education in Covington, Ky.; entered Miami University;

could not complete course on account of ill health; taught two years in Kentucky; has lived in Los Angeles six years; an attorney.

E. McALLISTER, San Rafael.—Native of San Francisco; academic training at St. Augustine, Benicia; classical course at State University; Graduate of Columbia Law School; studied a year and a half in Germany; unmarried; an attorney.

J. H. SEAWELL, Ukiah.—Attorney; married; deliberate and conservative.

ASSEMBLY.

J. L. SARGENT, Jackson, Amador County, *Chairman*.—Educated in the public schools at Mokelumne Hill; spent three years in College at Woodbridge, and two in Santa Clara College; has taught four years. His wife, who is Clerk of the committee, has taught five years. His sister, Mrs. L. P. Wilson, is preceptress of the State Normal at San Jose.

J. J. McELROY, lives in Oakland, where he was born.—A grocer. Educated in the public schools, an academy, and in a business college in Oakland.

C. F. BENNETT, Tustin, Orange County.—A native of Connecticut; lived in Illinois from '51 to '78; been in Orange County seven years; educated in the public schools of Illinois; left the Law department of Chicago University where he was a student and went "with Sherman to the sea." Engaged in orange culture. Will introduce and push a bill for free text-books.

WILLIAM HENRICKSON, Jr., San Francisco.—Native of S. F.; educated in the public schools and Dickenson College, Penn.; unmarried; an attorney.

J. C. SIMS, Santa Rosa.—A Virginian; educated in the University of Va.; has been in California five years; is city attorney of Santa Rosa; taught four years in Virginia.

H. B. MILLER, Oakland.—Native of Ontario; an attorney; self-taught; in California since '74; taught in the public schools of Alameda County, 1879-'80; attended Hastings Law School.

ROBERT M. BULLA, Los Angeles—Native of Indiana; educated in the well known Normal School, Lebanon, Ohio; taught in this school one year, and one year in his native state; has lived in Los Angeles nine years; an attorney.

Bills referred to these committees to date (Jan. 21.):

ASSEMBLY.

By Johnson, of Santa Clara.—To amend Section 1577 of Political Code, relating to the forming of new districts. This Bill contains this important provisio:

Provided, that the provision requiring that the petitioners shall reside a distance of more than two miles by a traveled road from any public school house may be dispensed with when the petition shall be signed by the parents or guardians of fifty or more census children between the ages of five and seventeen years resident of a district containing more than three hundred census children.

Such a provision would be found very useful in the suburbs of large towns and cities.

SIMS, of Sonoma.—To provide for the establishment of High Schools. The Bill agreed upon by the Superintendents covers this.

DREES, of Petaluma.—To amend Section 1543, relating to disbursements of public school funds. This should be carefully considered.

DUCKWORTH, of Monterey.—To consolidate Colleges and Institutions of higher learning.

DUFFY, of Siskiyou.—An Act to establish County High Schools. He and Superintendent Anderson should confer.

PUESCHEL, of Kern.—A Constitutional amendment to provide free text-books. It can be done now by districts. See duties of Trustees.

JOHNSON, of Humboldt.— To amend Section 1593 and 1620 of the Political Code. This relates to the election of Trustees and the furnishing of supplies.

CARLSON, of San Diego.—To amend Section 680 of the Political Code.

SENATE.

EARL.—To prevent corrupt practices in elections.

EARL.—To appoint Regents of the State University.

MCALLISTER, of Marin.—Amending 1770, relating to the county Board of Education.

HART, of Sacramento.—(By request.) An Act to pension teachers.

GOUCHER, of Fresno.—An Act to consolidate Colleges, etc.

VOORHEES, of Amador.—An Act for compiling, etc., and distributing certain books of the State Series.

GESFORD.—Relating to the issuance of School Bonds.

Copies of these bills can be had (in limited numbers) by applying to your representative.

President Kellogg.

At a meeting of the Board of Regents, held in San Francisco, January 27th, Martin Kellogg, acting President of the State University, was elected President. This relieves the strain which for months has been resting upon the Board, the Faculty, the students and Alumnæ. On the whole this action will be indorsed and accepted as wise. And this may be said without a shadow of reflection upon the able member of the Faculty whose strong personality attracted to him vigorous, determined and influential support for the same high place. Although in the sixties, President Kellogg is not an old man in the sense of being infirm. A well ordered life finds him really ten years younger than most men of his age. He is conservative, but not slow, kindly but not weak. He can grasp the strength of a situation and appreciate its humor as well. Indeed, his keen sense of the incongruous gives him readiness in repartee, and commends him to the admiration of students. This faculty is supplemented by a quiet dignity that never fails to take hold on an audience. His life has been that of the University. Neither can be written without the other.

A graduate of Yale in 1850, he came direct from his theological studies to engage in preaching on this coast, under the auspices of the Congregational Church. He was connected with the California College from 1861 to 1869. When the State University absorbed the College, he and Joseph Le Conte were the first two professors chosen. From 1870 to 1885 he was dean of the Faculty. So his service with the College and the University extends through thirty-two years. It can therefore truly be said that he knows the institution and he knows California.

In the discussions incident upon and preceding his election, he was largely and cordially supported by the Faculty, not so much, we believe, because of any mean spirit that objected to a younger member being placed over them, as it was a high regard for his real merit, and all things considered, the eminent fitness, that, if any of them should be chosen, it ought to be. Never in its history has the institution been so prosperous. If it is doing so well under an acting President, is it a mistake to make the acting President head *de facto?* This question could not well be answered in the affirmative. President Kellogg will probably attempt to make no great changes. Such an institution is a growth along the line of certain inspirations

and certain notions or principles of administration. These inspirations are all-pervading, these principles are well established. He will simply steer the ship on a familiar sea under known laws of wind and tide, with a clear eye and a steady hand. His sympathy with the secondary and primary schools is well known and unquestioned. His instinct is not to estrange, but to harmonize and unify. He has long been identified with the State Teachers' Association as an honored and active member. In the Teachers' Institutes of the county where he resides his face is a familiar one, and he has always been found ready to respond to invitation by shrewd, gracious speech. We congratulate him, we salute the University.

MRS. KATE A. CAMPBELL, wife of Fred. M. Campbell, ex-State Superintendent of Public Instruction died at her home in Oakland, Friday morning, January 27th, at 4 o'clock. She attended the recent State Teachers' Association in Fresno. Upon her return she complained of severe pains in the head. The physicians found that she was really suffering from acute brain trouble traceable to a fall in a fainting spell in the Bancroft Building, San Francisco, in September last. For a week before death her case was considered hopeless. She died peacefully, painlessly, surrounded by the members of her family.

No other woman engaged in educational work in the State was so well or so favorably known, and her unexpected death will startle and sadden hundreds. She was born in New York city, April 4, 1837. While a teacher in her native city she met her future husband. They married in 1857 and came to California in 1858, locating in Vallejo. In 1861 they came to Oakland, where were laid the foundations of a joint educational experience that made both their names familiar throughout the State. During three years she was Deputy State Superintendent of Public Instruction. For a dozen years she was Deputy Superintendent in the Oakland department. After her return from Sacramento, she taught for several years in the Oakland schools. Her tastes were naturally domestic, and she figured in public only for her husband's sake.

She had a wide acquaintance and hosts of warm friends. As a public official she was obliging, careful and kindly. As a hostess she was charming. An affectionate, sympathetic mother; her children idolized her. As a fond, devoted wife she has for years in her large circle of admirers been an accepted and unchallenged model, and her husband will miss her most. She adorned every walk of life to which she was called, and the teachers of the State may well feel that a noble soul has passed from among them.

Official Department

J. W. ANDERSON, - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - Deputy Superintendent of Public Instruction

THE following decisions have been rendered in this Department since those reported in the December number of the JOURNAL:

432. By the terms of the Constitution of the State, County Boards of Education have the entire control over the issuing of certificates. They may adopt whatever standard they deem expedient. They cannot compel any one, of course, to pass an examination; but they may, if they think proper, refuse to grant or renew any certificate, unless the required examination is passed.

433. Neither Educational or Life diplomas can be granted by the State Board of Education without a recommendation from a County or City Board of Education.

434. Boards of Education may, or may not, recognize certificates previously granted by them, when application is made to them for a recommendation to the State Board for Educational or Life diplomas.

435. The average daily attendance in high schools forms no factor in the apportionment of either State or County school moneys. The support of high schools is provided for in the Acts relative to high schools, or in the charters of cities, and the State and County funds are to be appropriated to the maintenance of primary and grammar schools.

436. The Municipal Corporation Act makes no provision for the appointment of a School Superintendent in cities of the fifth class. Section 797 of said Act provides for the election of a secretary for the Board of Education in such cities; and section 804 thereof specifies the duties of the secretary. These duties are those that appertain to the position of Superintendent. The Board of Education cannot, therefore, employ a Superintendent of schools in cities of the fifth class either by written or oral contract, the Secretary of the Board being practically Superintendent. This Secretary is also a member of the Board of Education.

437. There is no such thing as a State certificate for teachers in this State.

438. The Principal of a school is certainly entitled to a key for the building, and for any room in the building; and it is the duty of the Board of Education or Board of Trustees to furnish the keys. Janitors are under the direction of the Principals, and must follow such directions.

439. A district cannot be held liable as such for the payment of any indebtedness contracted in excess of the school moneys accruing to the district for the school year in which the contract is made. If trustees contract any liability

against the Library Fund of the district in excess of the moneys apportioned to said fund for the school year, the Superintendent should refuse to issue a requisition in payment of the excess.

440. The Attorney General decided, last July, that the State Fund apportioned at that time having accrued from taxes, and from interest on bonds, for the year in which the taxes were levied, and the interest accrued, belonged to the school year ending June 30th, 1892. The same principle will obtain in reference to the apportionment for next July; and the fund then apportioned will be available for the school year ending June 30th, 1893.

The amendments to the School Law, as provided by the convention of Superintendents, have been embodied in a bill and presented to the Legislature. The utmost care has been taken to make the law such that few future changes should be necessary. It is to be hoped that the Legislature will give to the matter the attention which its importance demands. The law for the government of the schools has never had so complete a revision as at the late convention, and such being the case, the opinions of the Superintendents, who, from their opportunities, have had full knowledge of what is required, ought to have great weight with the members of both houses. I have no doubt that the honorable gentlemen composing the Senate and the Assembly will be greatly guided by the fully expressed opinions of the convention.

The Fifteenth Biennial Report of the State Superintendent is now ready for distribution, and will be sent out as soon as possible.

SEE ad. of Pacific Excursion Company.

EVERY school Principal in the State should own a copy of Will S. Monroe's report on Examinations and Promotions. Send 15 cents in stamps to the JOURNAL.

A FULL list of the teachers attending the State Association and the address of the President (which we requested for publication,) came too late for this number.

FROM a number of the institutes held in November and December, we have received no report. Others, such as Shasta, of which we knew personally, and Inyo, were crowded out by the notices due to the State Association, Educational Council and Legislative session. We hope Superintendents and teachers will appreciate the situation.

READERS of the JOURNAL are to be congratulated upon the two strong articles to which the large part of the February number is devoted. They have a genuine pedagogical value, the facts and opinions they contain having been collated by experts with great care. Both will be published in pamphlet form by the JOURNAL. The able papers by Principal E. T. Pierce of the Chico Normal, and Chas. Hutton of the Los Angeles Normal will appear in a future number.

IN the March number will appear a cut of the California World's Fair Building with plans showing space allotted to the Educational Exhibit. Superintendents and teachers who have been apathetic in this matter should for the reputation of their counties go to work at once. So little is asked for, involving so little extra labor, that it seems no county should be without representation. Address, Chas. H. Allen, room 73. Flood Building, at once for further particulars.

CALIFORNIA SCHOOL ITEMS.

SACRAMENTO will soon fall into line with a new High School building.

MELROSE DISTRICT, Alameda county, wants a new $5000 school building.

$65,000 are to be expended in adding to the school facilities of the city of Alameda.

DAVID B. HAYES, for many years identified with the schools of Butte county, died recently in Thermalito.

EX-SUPERINTENDENT J. C. RUDDOCK, of Mendocino county, is a candidate for the office of Surveyor General.

PROF. HOWISON, of the State University, has been appointed Vice-President of the psychology section of the World's Fair.

D. T. FOWLER, formerly Principal of the Prescott school, Oakland, will have charge of the Fresno county exhibit at Chicago.

PRINCIPAL DUNCAN STIRLING, of the Castroville schools, takes the place of J. T. Stockdale on the Monterey County Board of Education.

Peoples Home Savings Bank

AND SAFE DEPOSIT,

805 Market Street, Flood Building, **San Francisco.**

Organized May, 1868.

Guaranteed Capital	**$1,000,000.00**
Paid-up Capital	**333,333.33**
Surplus Profits	**45,000.00**

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COLUMBUS WATERHOUSE, President; F. V. MCDONALD, Vice-President;
J. E. FARNUM, Secretary and Manager; DORN & DORN, Attorneys.

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Dr. R. H. McDonald, Geo. D. Toy, D. S. Dorn, R. D. Robbins, F. V. McDonald,
Joseph Winterburn, Columbus Waterhouse.

This bank receives savings deposits on term or ordinary accounts in sums of one dollar and upwards. *Interest paid from date of deposit, semi-annually, or credited to the account.* Children and married women may deposit money subject to their own control.

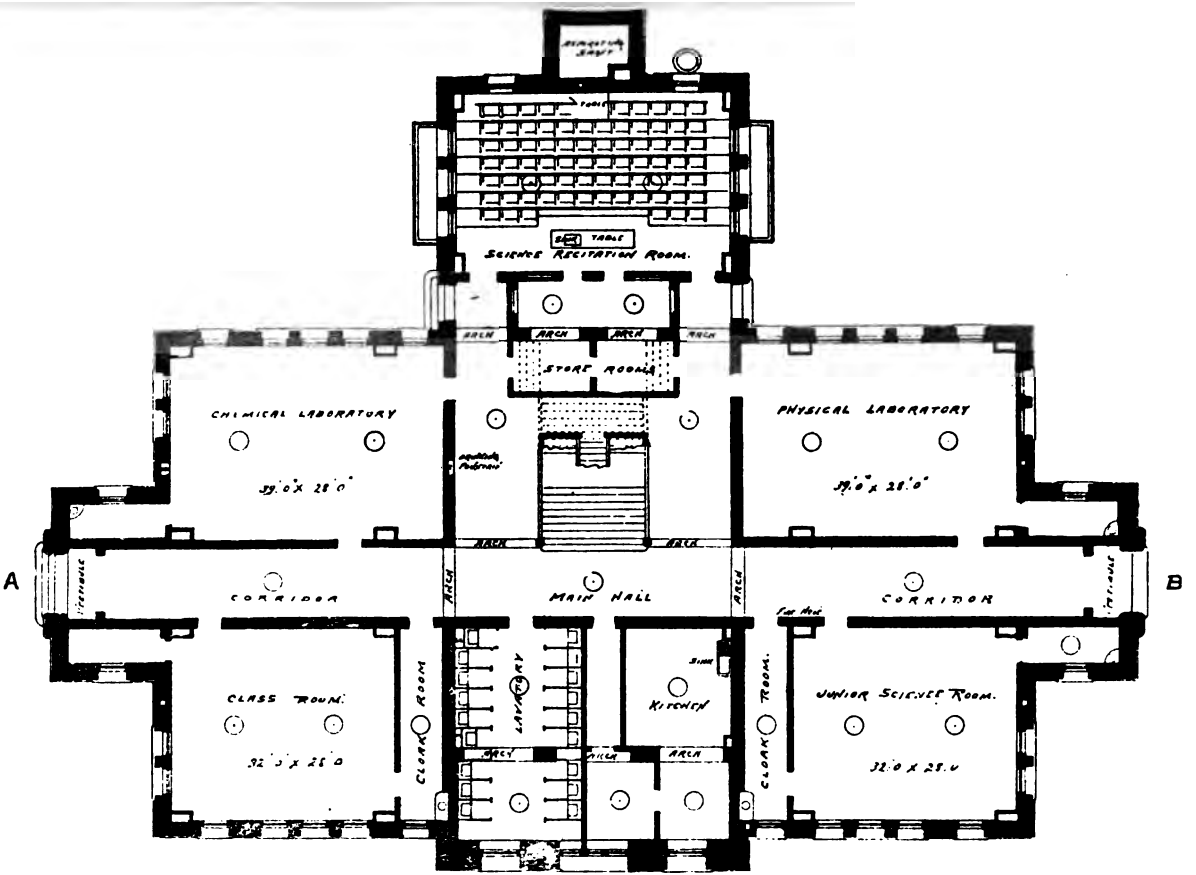
The five-cent stamp system in use in connection with this bank.

This bank also has connected with it a Trust Department, authorizing it to act as trustee for executors, administrators and corporations.

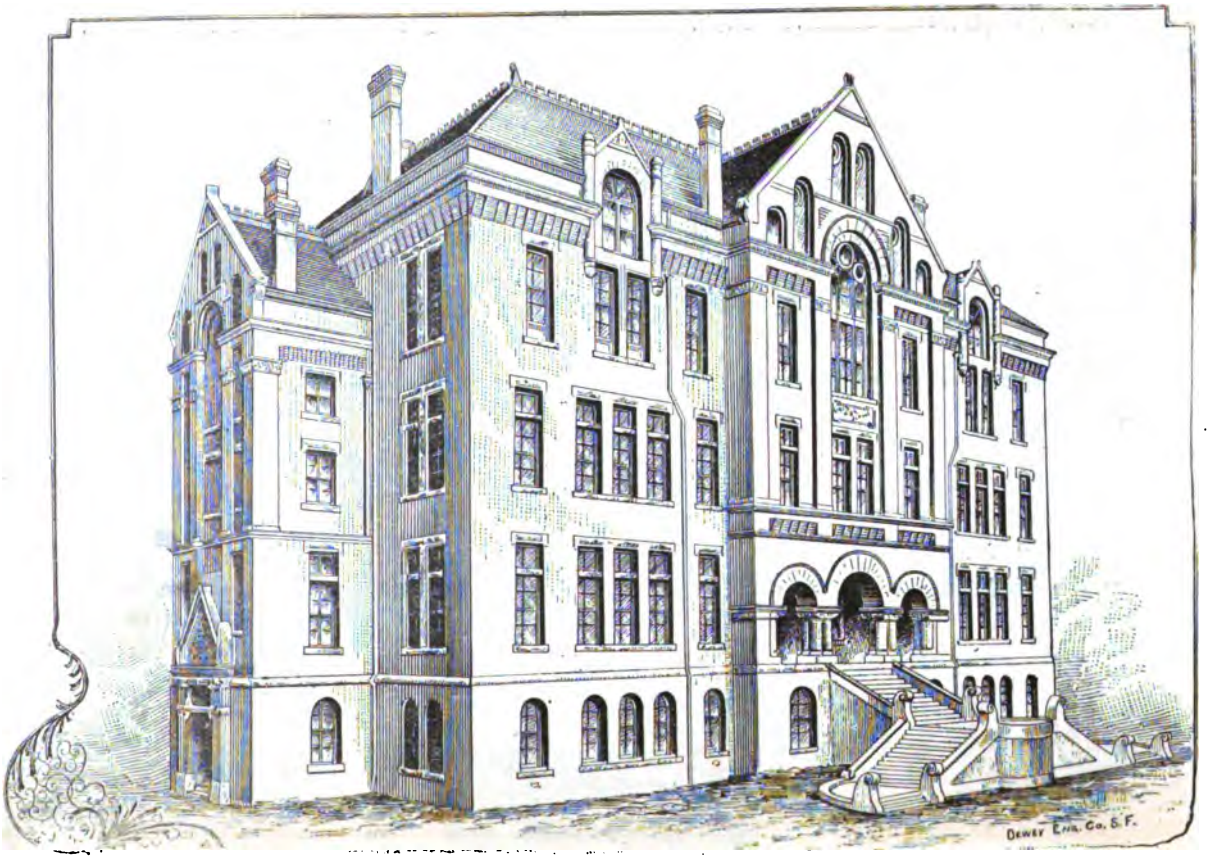
THE SAFE DEPOSIT DEPARTMENT is a special feature of this bank. Safes to rent by the month or year from $4.00 to $20.00 per annum. Large vault for the storage of trunks, chests, boxes and valuables of every description.

For the convenience of customers we receive commercial deposits, make collections, issue local and foreign exchange. Accounts of corporations, firms and individuals respectfully solicited

MONEY TO LOAN ON REAL ESTATE AND APPROVED COLLATERAL SECURITY.



LABORATORIES AND RECITATION ROOMS OF SCIENCE DEP'T, SAN FRANCISCO GIRLS' HIGH SCHOOL.



GIRLS' HIGH SCHOOL, SAN FRANCISCO, CAL.

THE

PACIFIC EDUCATIONAL JOURNAL.

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CURRENT EDUCATIONAL THOUGHT.

EXPERIENCE has proven that it is impossible to grade a series of three readers, so as to cover a period of nine years' school life.—JAMES G. KENNEDY,, in the California Educational Council Reports.

SARA E. WILTSE: The most hopelessly dull children are the scatter-brained ones who catch and toss words, and facts even, from tongue-tips without turning them over in their own minds.—*N. E. Journal of Education.*

THE development of the American schools into what they are to-day is due in no small degree to the direction given to the work, to the revealing of the weak teaching, and the awakening of enthusiasm among pupils for good work, by systematic examinations given by superintendents.—SUPT. ARTHUR POWELL.

NOW, what is it that a judicious examination in writing does for a pupil? Of course it tests his knowledge. But it is also a valuable educational instrument. It teaches method, promptitude, self-reliance. It demands accuracy and fullness of memory concentrated attention, and the power to shape and arrange our thoughts.—JOHN G. FITCH.

THE pedagogical need, as I see it, is the clear grasp of the few principles that are really fundamental, and their intelligent application in the processes and methods of the art. My own studies in this field have resulted in a considerable reduction in the number of principles which I once believed to be fundamental, and this has greatly simplified education both as a science and an art.—E. E. WHITE, in *Ohio Educational Monthly.*

THERE is a rapidly growing sentiment on the part of the people that it is absolutely necessary to have in the schools the services of the very best teachers—of those who are specially trained for the important work. The people are no longer satisfied with the employment of the mere school-keeper, but are demanding and are showing themselves willing to pay for artists; not mere artisans in the school work. This is evidenced by the fact that the excellent influences of our Normal Schools are more fully appreciated by the people than ever before in the history of our educational interests; and by the further fact that in both our great Universities departments for the special training of teachers have been established.—HON. J. W. ANDERSON, State Superintendent of Public Instruction, California.

THE great majority in our colleges and universities are learning what they may make useful; they will become engineers, architects, scientists, professionals, teachers, all having some objective point ahead. They are gathering material, they are equipping themselves, and the higher institution that will not or cannot furnish facilities for such work, will be passed by. In the secondary school, the same law should hold, and the 96 per cent. should be able to gather serviceable material for their demands. What they get should be the most practical, which they can convert into capital. Does the plan as now pursued fit in the best manner for life's duties those who do not complete the course?—CHAS. E. HUTTON, *Los Angeles Normal*—in the California Educational Council Reports.

YOU may as well try to teach Algebra by having the children copy problems already worked out as to have the pupils learn drawing by copying pictures. The child must draw from the object and must express his own thought, not the teacher's, if you wish him to acquire power. This will lead him to draw what he sees and not what he knows to be the facts concerning the object.

The Homestead trouble ought to open the eyes of school men. Skilled workmen are paid from three to fifteen dollars a day. Of the boys who have left the common and high schools in the last ten years how many have become skilled workmen? You will find that the skilled American workman is the exception. God hasten the day when we shall have in every large city institutions similar to the Armour Institute, which has for its motto: "The harmonious development of *hand, head and heart.*"—LEE L. SUMMERS, Iowa.

GENERAL DEPARTMENT

Examinations and Promotions.

REPORT OF EDW. T. PIERCE, PRIN. STATE NORMAL SCHOOL, CHICO. PRESENTED AT FRESNO, DECEMBER 28, 1892.

As a member of this committee, (of California Educational Council) I was asked to ascertain the views of Normal School Principals on the question before us and report thereon at this meeting. I therefore addressed a copy of the following letter to about sixty of these gentlemen:

"The Council of Education of the State of California is to prepare a report on 'Examinations and Promotions' to present to the next California Teachers' Association. As a member of the committee on the subject, I desire to learn the views of the principals of the state normal schools of the United States on this important question.

I. What, in your judgment, should be the basis of promotion (written examination, class standings or teacher's estimate) in

a. Primary schools (first, second, third and fourth years)?

b. Grammar schools (fifth, sixth, seventh, eighth years)?

c. High schools (ninth, tenth, eleventh and twelfth years)?

II. Is the written examination (wholly or in part) the basis of promotion in your normal schools?

What plan is followed in your training school?

III. If you do not believe the written examination to be a satisfactory means of determining fitness for promotion in the common schools, please state as fully as possible the plan or plans that you would adopt."

I received fifty replies, the summary of which I have tabulated as follows:

Basis of Promotion.	In Primary Schools: Per cent.	In Grammar Schools: Per cent.	In High Schools: Per cent.	In Normal Schools: Per cent.	Average in all grades of Schools: Per cent.
Proportion of Answers in favor of the Teacher's Estimate alone	68	14	4	4	22.5
Proportion of Answers in favor of Class Standings alone	.....	.....	.....	2	.5
Proportion of Answers in favor of Written Examinations alone	2	8	16	52	19.5
Proportion of Answers in favor of the Teacher's Estimate and Class Standings combined	10	14	12	.....	9
Proportion of Answers in favor of the Teacher's Estimate and Written Examinations combined	10	30	22	6	17
Proportion of Answers in favor of Class Standings and Written Examinations combined	2	12	26	30	17.5
Proportion of Answers in favor of the Teacher's Estimate, Class Standings and Written Examinations, combined	8	22	20	6	14
	100	100	100	100	100

The weight of opinion is in favor of the Teacher's Estimate for promotion in Primary Schools.

With regard to Grammar Schools, the opinion seems to be in favor of a combination of ways into which the Teacher's Estimate enters largely.

For High Schools, the opinion is the same as that for Grammar Schools.

Written Examinations are used in over half of the Normal Schools as the sole basis for promotion; in the others, Class Standings figure largely.

For promotion in the three grades of Public Schools, Primary, Grammar, and High, combined, about 30 per cent. of the answers favor the Teacher's Estimate, 8 per cent. Written Examinations, and 62 per cent. a combination of two or more ways.

The general weight of opinion, however, as evinced by the combined answers, seems to favor the Teacher's Estimate. I have thought it best to copy the special replies, thus giving a short symposium from Normal School Principals on the question. They are as follows:

Edward Searing, Mankato, Minn.:

I have yet much faith in the written examination. The current is perhaps setting against it, but I do not think it will be swept away.

George W. Getter, Girls' Normal School, Philadelphia, Pa.:

I can see no good reason why an honestly conducted examination can do any harm at the end of a school term, and I see many reasons for hesitating to favor promotions without an examination, particularly in higher grades and schools. I cannot see how any experienced teacher can endorse such a proposition. Perhaps I am narrow in my views; I trust not, however. I have thought much on the subject and have been a teacher over forty years—twenty-eight years in my present position. I feel that to promote without an examination in this school would destroy much of its usefulness, and result in great injury to the pupils, both morally and intellectually. The written examination is entirely the basis of promotion in this school, and I sincerely trust it will always remain so. The same plan is adopted in the Training School, except that we examine bi-monthly during the year, instead of at the close.

William J. Milne, State Normal College, Albany, N. Y.:

If written examinations are conducted in a proper manner they will be satisfactory in determining the fitness for promotion. The questions should be prepared with care and the answers marked with discretion.

Albert Salisbury, Whitewater, Wis.:

I believe thoroughly in the value of written examinations, but largely for their educational value. I could not dispense with them as a selective agency for promotion, and yet I feel that the teacher's judgment of the pupil must have consideration and pretty free play. We lay considerable stress upon the pupil's power of expression in the classroom.

J. M. B. Sill, Ypsilanti, Mich.:

In large classes, written examinations seem to be necessary generally, and especially in higher grades. The main point is, however, just determination of ability *to go on.*

H. W. Seerley, Cedar Falls, Iowa:

I do not believe in the written examination as a sure means of determining fitness for promotion, but I do believe that it is necessary to examine the work o the common schools about twice a year for the purpose of guaranteeing that the work done is good on the part of both teachers and pupils. I think the hardship imposed upon teachers in reading the manuscript is the sole objection, hence I would rather be inclined to use it as a means of instruction to secure exactness than to use it as a test to depend upon absolutely in promoting students. On the other hand, I fear that if the teachers' estimates were to take the place entirely of the examination by the supervisory officer, it is as much likely to be abused as the other system.

John M. Milne, Genesee, N. Y.:

I believe that written examinations are a reasonably satisfactory means of determining promotions, but not the only satisfactory means.

In order that you may understand better my views in relation to promotion by examination and by estimate of the teacher, I will explain the plan in operation in this school through the primary, intermediate, normal and academic departments. It is as follows: Students are informed at the beginning of the term that all who, in the estimation of the teacher and by class record, stand 85 per cent. and over will be relieved from examination (or "selected," as we call it), unless one-third or more of the class, who are given an opportunity to vote by secret ballot, decide that the teacher's judgment is wrong. In each class the names of all persons who are selected are written on the board by the teacher and copied on a slip of paper by each pupil. Voting is done by striking from the list any name which the pupil thinks has been improperly selected.

This plan is carried out in full in the normal and academic departments, and as fully as possible in the intermediate and primary. In the intermediate and primary the selections are practically made without voting by the pupils. In those departments the selections have to pass through the hands of the critics, who are expected to visit the classes daily. The object of this plan is to secure better class recitations, and it results in that usually.

W. H. H. Beadle, Madison, S. D.:

Examinations have value as incentives to pupils and as standards for their judgment of progress, as well as information for the teacher. The better the teacher, the less use for formal examinations. The examination is used by some superintendents and principals to show schools better than they are, and thus mislead boards and pupils. They prepare show work, and in drawing, penmanship, and neatness, look well, but in thoroughness in solid studies are imperfect. In other cases examinations are made the sole basis of promotion, and the tests are supplied by the State or by the head of the school. All the fair work of the term or year goes down before the results of this one nervous strain, which may take many at a disadvantage.

In a city's graded schools I would have my fourth grade primary teacher one whom I could trust; the same for the eighth or last grade grammar. These grades should be the gates to higher classes. It would be better if all grades were so carefully guarded; these *must* be. When each teacher makes out her own examination questions and is moved by a desire to show well, knowing in advance that the papers are to be put on exhibition, much time is wasted in practicing. This is true in county and State exhibits. Shall it be true in the Columbian exhibit?

In all such dishonesty the pupil shares to some extent. What good can come of it? Thoroughness in all studies is the best basis for integrity of life and character and good citizenship.

G. S. Albee, Oshkosh, Wis.:

Written examinations should not prevail until the mere act of writing ceases to demand the pupil's attention. In grades below the high school, both written and oral examinations are desirable, involving catechism and discussion of topics; the latter phase in mode least burdensome to pupil, *i. e.*: some write better than they can talk, others the reverse. In all examinations we should aim to diminish mechanical difficulties, that the thought tests may be more thoroughly applied. In our training department of eight grades, most branches above the fourth grade are remitted for one or two quarters in each year, other work taking their places.

In all such cases pupils are examined in the branches when laid aside, thus avoiding severe stress extending over days at the close of the school year. Even when branches are not thus remitted I apprehend that examinations should be extended through the last term, scarcely more than one in two weeks, with more profit and more justice to pupils than is usually the case.

George L. Farnham, Peru, Neb.:

I believe that teachers can do their best work when left free to pursue their own course, subject to the general oversight of the principal or superintendent. Let him take such means for determining fitness for promotion as he deems proper. I believe in no scheme that will relieve the teacher from the exercise of his best judgment. Written examinations at irregular intervals may keep pupils alert, and if properly conducted relieve them from the unnatural strain that stated examinations impose.

Irwin Shepard, Winona, Minn.:

Primary: Teacher's estimate of (1) acquisitions, (2) individual power. Grammar Schools: Class standings, in which teachers' estimate of growth and power enter largely, with examinations.

C. C. Rounds, Plymouth, N. H.:

The written examination is often unsatisfactory as a test, on account, first, of the character of the examination; second, from the character of the instruction. Given: suitable examinations, good schools, sensible teachers, from many years' experience, I prefer written examinations, class standings and teachers' estimate combined.

D. Mcluegor, Prattville, Wis.:

The written examination is only a device, and like all other devices must not be passed for more than its actual value. My thought is to make daily work the chief estimate in determining promotions, and this must be estimated by the teacher. Daily work should include written recitations, each to be considered as of equal importance to an oral recitation. Then there should be review examinations to be taken into account in promoting, daily work to be considered as 2, review work as 1, in making up report.

James M. Milne, Oneonta, N. Y.:

We have no stated examinations in the normal department. Teacher's estimate is solely the basis of our work. If teacher is in doubt from class standing about estimate, a written test may be given in the class, covering only the time of the recitation. Such are called class tests. The time for such tests is never known to the pupils, hence no special preparation or worry on the part of students.

G. M. D. Eckels, Shippensburg, Pa.:

In graded work I believe in taking into account the pupil's capacity for the work of the new grade, as well as the fact of his having completed satisfactorily the work of the grade he proposes to finish. The pupil should therefore be tested partly by presenting to him work not found in his text book.

James M. Green, Trenton, N. J.:

My plan should include all the means I have of knowing whether or not the pupil is prepared to be promoted—my memory, my memoranda of class and my examination records. I think that common sense should be used on this point, as on others.

Thomas B. Noss, California, Pa.:

The better qualified the teacher is for her position, the less need is there for formal examinations.

H. C. Pritchett, Huntsville, Texas:

I prefer live classroom work, with the free use of the blackboard in all recitations, with frequent written recitations and occasionally a written examination, given so the pupil will not be aware of the fact that he is being examined, and will not be scared out of his wits. The stated examination upon which everything is made to depend appears to me to be unfair, leads to cramming and to cheating. I abhor it.

W. E. Wilson, Providence, R. I.:

Secure teachers of character, force and intelligence. Train them to teach, not merely to give instruction; make them responsible for results in character and scholarship; trust and support them, but exercise judicious supervision. If any of them prove to be incompetent or disloyal to the true interests of their pupils or of education, bounce them and send to Rhode Island for others.

E. B. Prettyman, Baltimore, Md.:

Teacher's estimate is better aided, I venture to suggest, by the French method of having a day's work in school about once a month, but not at a fixed time, written by each pupil in an individual book—I mean one book for each pupil—which is taken by teacher, corrected and kept by him till the close of the pupil's attendance in that school, forming a true history of his progress throughout his school life. This book aids the teacher much in forming estimates for promotion.

Estelle M. Darrah, Teachers' Training School, St. Paul, Minn.:

I should give the question of promotion less prominence, and educate the public to regard the development of the children as of infinitely more importance. I should require the principal to know personally what work children were doing, and, together with the teacher, to settle the question of promotion upon that work. I should give frequent opportunities for the children to write upon topics or questions as a test of their *power*, not of their fitness for promotion, though their written work would partly determine their fitness.

Ellen Hyde, Farmingham, Mass.:

I do not believe in artificial stimula nor arbitrary tests of any kind for children. Marks for class work and marks for written examinations are only one form of expression of the teacher's estimate, and the worst form, since figures can never tell the exact truth about the pupil's mental and moral state, and frequently are the worst possible liars. I consider the commonly accepted system of promotions the worst evil of our school system, and hope your council may do something to modify it.

T. B. Stowell, Pottsdam, N. Y.:

Written thesis are preferable to written examinations. Formal examinations are enervating. Formal examinations encourage "cram." Thesis-writing necessitates association of ideas. Thesis-writing calls for apperceptive knowledge.

Thomas Hunter, Female Normal College, New York City:

I believe written examinations to be, in a great measure, sources of many evils, leading to "cramming." They are at the best a mere lottery. The refined and delicate often fall below their true standing, while the bold and dishonest may attain a rank they little deserve.

X. Y. Z. Snyder, Greeley, Col.:

The teacher's judgment is the basis of promotion, made up by the pupil's power growing in on the teacher and by tests occasionally.

The pupil's ability to do good work in an advanced grade should be the criterion of promotion to that grade.

The pupil's ability to do good work *grows in on the teacher* in recitation and in reviews, oral and written. I have twenty professors teaching for me. When I want one to do a certain work, I know just where to go or to whom to go that I may get it done. I do not need to hold an examination to determine who can do it. I know. It has *grown in on me. I can't help but know.*

It seems to me that these replies and the summary that I have prepared, clearly indicate that "the tide is setting the other way." Dissatisfaction with formal tests is evidently felt by the teachers.

What do the people say? Let one speak for himself. The absurdity of written examinations has been shown very conclusively by a layman, Edward Everett Hale, a careful observer, a scholar who is in close touch with teachers and the public school system. I quote quite largely from an article of his in the *Boston Commonwealth:*

The visible and certain nuisance of written examinations is an evil which is present before a community as civilized as ours all the time, except the summer vacation of the schools and colleges. It involves an absurdity equal to the absurdities of the decline of chivalry. It waits for some Cervantes who shall ridicule it so thoroughly as to drive it entirely from the public mind, so that the twentieth century may know of it only as most people know of the 'Squires of chivalry by Sancho Panza, or of the Knights Errant by Don Quixote. But as the schools of the larger towns of Massachusetts open for the autumn, this month is perhaps the best month for bringing forward, with however little courage, a statement of the misery inflicted upon scholars, upon parents and upon teachers by this rigmarole. If it were only that one should discharge an annual duty, and at the bar of any judge be able to say: "I sounded my little trumpet, but the world was making such a noise that it did not hear." Jules Simon, now better known as a statesman than as a distinguished professor in the University of France, used to say: "When I was young we prepared students for life; now we prepare them for examinations." The bitter satire of this statement could be repeated by ten thousand teachers in Massachusetts to-day. It must be that a good many of the committeemen and supervisors, who have to do at least with the outside machinery of the thing, will sympathize with the teachers. We shall have half a dozen letters before the week is over to explain to us that, unless there is a system of mechanical examination in the Boston schools, nobody can tell which school is "up to mark" and which school is not. Nobody can tell, for instance, whether a half dozen Italian boys

eleven years old, who are at work in the Hancock school with the difficulties of a new language before them and with national peculiarities of early training, can answer on paper with ink the same questions which a set of boys of Boston parentage and training, who are in the Dwight School, can answer. It is perfectly true that, without a fixed examination from printed papers emanating from the central office, nobody can tell this in such a way as pleases the statistical people. But without any knowledge of one individual of either class in the Hancock School, the Dwight School or the Dudley School, I can tell, without having seen one of the examination papers. What earthly or heavenly reason can there be for driving all these boys in these three classes through such a series of questions, merely for the purpose of giving the statistical answer in a supposed inquiry, where everybody knows the real answer before the inquiry is made, and where the answer is of no importance when it is attained? Do we really want the Hancock School, for instance, to be the precise counterpart of the Dwight School, or the Dwight School to be the precise counterpart of the Dudley School? Do we not really want that the genius of the teacher in one shall show itself in his way, and the genius of the teacher in another shall show itself in his way? Are we really trying to turn out fifty thousand clothespins of precisely the same pattern in the Boston schools, or are we trying to make of each boy and girl the best that can be made, and to encourage as we can the particular genius of each separate child? In some transfer of children from one building to another last summer there were examinations of unusual strictness, and the pupils were drilled for days in advance by what might be called mock examinations. A careful and conscientious teacher, worn out by a day spent in this drill, lamented to a friend, "Oh, it is so hard. They think so much of their writing—for they will be marked on their writing—that they forget their spelling; or else they think so much about their spelling that they forget to put in quotation marks. And some of the boys are so thoughtless and indifferent." Upon inquiry, it appeared that the average age of these boys who were "indifferent" to quotation marks was eight years and a half. Is it possible to conceive of rigmarole more absurd than that involved in a system which produces such results?

It seems to me that there are three things to consider in the discussion of this question of examinations for promotion. *First:* the effects of such examination on the pupil; *second:* its effects on the teacher; and *third*—if not found satisfactory, what should take its place?

When I use the word examination, I mean the formal examination at stated intervals. With regard to the pupil, we should ask: *First:* what does he gain by it? *Second:* how is he harmed by it? Do examinations benefit the pupil in any way? Yes, they help him to condense his knowledge and put it into the fewest possible words; they compel him to think quickly, if he is not "scared out of his wits," as President Pritchett puts it, by the fear that he will fail to finish his work in the allotted time and make at least 80 per cent.; they put the cool, calm pupil on his mettle and spur up the dull one to greater effort.

HARMFUL TO PUPILS.

Are they harmful to pupils? Yes, to many. Their harmfulness has been discussed for years at almost every gathering of teachers. The three most obvious objections advanced are—*First:* the tendency they have to lead pupils to work for marks and not for knowledge; a certain per cent., no matter how obtained, means promotion, often leading to dishonesty, cheating, c ing, anything to reach the required standard; *second:* the almost inevitable "cram" at the close of the term, the very suggestiveness of whose name is its best commentary—one thing that can be said in its favor is that the mind is furnished a natural means of ready relief, in its power to forget immediately what it has crammed; *third:* the nervous strain which they cause. This latter effect is less easily repaired and invariably falls heaviest on those who least need the test of examination. As President Hunter of the New York Normal College says: "The refined and delicate often fall far below their true standing, while the bold and dishonest may attain a rank they little deserve." I know of a case in which one of the most earnest and intellectual young ladies of a certain school, became so excited over the weekly examination and so worried with respect to the results, that she lost all power of concentrated mental effort at examination times, and nearly always failed. Almost total loss of sleep the night before the examination at last caused her to resort to nervines to strengthen her on the day of the trial. Are there not many teachers who could give instances of a like character? I think that all of us who have had much experience in the actual work of the school-room, and who have given careful thought to the question, are ready to affirm that there are harmful as well as beneficial effects on the pupil in these examinations, and have regretted that some scheme could not be devised from which these harmful elements could be eliminated. One of the greatest objections in my mind, however, is the formal character of the work done at such a time, the lack of individuality that it shows, and its failure to test the pupil as to his real abiding knowledge on the subject,—in short, its non-educational value. Examinations are usually faulty, perhaps because the recitation is faulty. Both are often made up of disconnected questions and answers, involving no strict logical consecution of ideas. The examination questions are often mere repetitions of those already propounded in the recitation. Correct answers to these questions fail to show logical thought on the subject in hand, and tend in no way to strengthen the mind of the pupil.

They fail to test whether the one who is examined can reason from cause to effect, as they rarely touch on any phases of the subject other than those already discussed in the class. As conducted by most teachers, they strengthen memory at the expense of the other faculties. They require no real thinking, even were the mind of the pupil in a condition to do its best work. It appears, then, that examinations are only partially beneficial to a few, are decidedly harmful in all their effects on some, and are partially harmful to all.

NO GAIN TO THE TEACHER.

Second: what is gained by the teacher in these examinations? I have yet to find one that is earnest, wide-awake and efficient who knows any more about the qualfications of any pupil in his class after a formal examination than he does before. I like the expression of President Snyder of Greeley, Colorado. The knowledge of the power of the pupil has "grown in on the teacher. He can't help but know." There is little or no help to an efficient teacher in a formal examination. Is there harm? Let any one answer who has spent hour after hour, till late at night, for a week at a time, looking over examination papers at the close of a term or a year. The faithful teacher has done all that he ought, physically and mentally, each day of the term; he knows or should know, the strength of each pupil in his class. Why, then, this strain? The only answer that comes to us is the echo "why?" from thousands upon thousands of tired teachers in every State between the Atlantic and the Pacific. Teachers are often criticised because they do not read and study more. Some one has remarked that they are the most poorly informed members of the community in which they live. The examination is, in a great measure, the cause of the narrowing of the mind of the teacher to the per cent. basis. Of what use is it to him to know anything of psychology and how to develop the child's mind? What does he gain in his work by storing his own mind with the treasures of history, science, and literature, or by keeping conversant with all the live issues of the day? He can make no use of this knowledge in the school room, for the children will not be examined in it; he has no time to promote his own intellectual advancement by reading or pursuing some line of study that is especially attractive to him, for he must look over papers during every spare minute of his waking hours. All he is allowed to think of; all he dreams about, is memory work, memory work, examination, examination, per cent. per cent.!

INDIVIDUALITY SACRIFICED.

Some years ago, it was remarked that very few of the teachers in one of our largest cities, took any interest or part in the State associations. When asked *why*, one of them replied that it would do them no good if they did. "What," said he, "is progress to us? Individuality has lost its meaning. We are simply parts of a machine. If we should learn anything new at these conventions, it would do neither us nor our pupils any good, for we could not put it into practice." This argument might be advanced by the teachers in many small graded schools.

Now it seems to me that there is only one point in favor of written examinations and several points in the argument against them. It may be well to recapitulate the latter. They (and the usual system of marking recitations) are wrong incentives to study and often lead to different phases of dishonesty, to the moral detriment of the pupil. The strain on delicate and nervous pupils is great, often preventing them from doing their best work as well as injuring their health. As generally conducted, they involve few educational principles and are decidedly weakening mentally. They aid the teacher slightly in forming a right estimate of the progress and capability of a pupil, but do exhaust his strength and leave him little time for the study that will tend towards intellectual advancement and professional improvement.

WHAT SHOULD TAKE ITS PLACE.

This brings me to the third phase of the question: "What should take the place of the examination for promotion?" We ought to be able to devise a plan that shall be beneficial to all of the pupils and harmful to none, and that shall be educational in its results—a method of teaching and testing that shall not so completely exhaust the strength and time of the teacher as examinations do, and which, at the same time, shall be for him a truer test of the mental advancement and capacity of those whom he is trying to teach.

The replies from the prominent men who have addressed me on this subject are too meager and too widely divergent in sentiment to give any foundation on which to formulate a scheme that may test fitness for promotion. I hope, therefore, that I may be excused by this council for expressing my own ideas on the question. During an experience of many years in all grades of schools, I have tested all of the ways mentioned in my circular as a possible basis for promotion. I have at last reached the following conclusions and adopted the following plans:

The progress and ability of the pupil must be tested. The qualified teacher makes the test in his teaching. In every subject, he leads his pupils along the three steps by which alone they make any knowledge really a part of themselves, viz.: observation, generalization, and application. The last is the test. Can the pupils apply what the teacher has tried to help them to see? If not (and this test is necessary before the next topic or subject is studied), then the pupil is not ready for advancement or promotion. Here, much, indeed all, I might say, depends on the teacher's knowledge of the laws of mental development and his skill in questioning. He must be able to judge of the action of the child's mind and the mental strength involved in the answers and applications instead of simply taking account of the words recited. If he understands the principle of apperception and its application to all the subjects pursued in the school, he *must* know when pupils have grasped new knowledge.

A RECORD—HOW KEPT.

It is wise to record his judgment of the results of these tests and not depend entirely on his memory. The inductive study and discussion of a single principle or topic often require several days. The record of power to apply in such cases, must necessarily be at irregular intervals, at the close of "*lesson wholes*," as De Garmo calls them. During several recitation periods, the teacher may be leading the pupils up through observation and generalization to application and there is nothing to record, unless he adopts the "Mind Chart" plan of Supt. Frye and takes note of every phase of mental activity.

Let this record in all grades of schools be by letters, representing approximate degrees of excellence. Dr. White's plan is good, the letters E. G. F. and P. representing "*Excellent, Good, Fair, and Poor.*" Emulation to be classed in the highest division is enough for most pupils, and what teacher is able to measure the work of a mind so accurately as to determine that it is ½ of 1 per cent. stronger than that of another?

To preserve the one benefit of the examination, namely, that which results from the pupil's effort to condense his knowledge and put it into clear, forcible language, I should have him write many short papers, mostly topical. The writing of these papers should never require more than fifteen or twenty minutes, and they should be classified in divisions as indicated above. This classification should take into account the carefulness, the thoughtfulness and the individuality of the writer. It should never be known to the pupil when these papers, or

tests if you choose to term them, are to be required. This saves all useless worry on the part of the pupil. He knows that his daily work and honest thought count. There is no chance to "cram" during the last month of a term; there is a premium on steady effort; he will do his "level best" all of the time. When he becomes old enough to know that a failure to take one step in the necessary process of all learning will prevent him from attaining the knowledge sought after, he will become an earnest ally of the teacher, and the battle will be won. To aid pupils to grasp a whole great division of a subject, and to put thoughts into logical form, I should require them to write occasionally a theme on some subject relating to their work. So much for the pupil.

As for the teacher, this plan relieves him from the strain imposed on him at the close of the term in looking over hundreds of examination papers. If these written tests are thoughtfully assigned with regard to time, he may have one set of short papers from some class almost daily, but it need not take him more than twenty minutes to look them over. The system of marking by letters, allows him to exercise his judgment in cases in which a paper shows thought, but which could not be allowed 80 per cent. by the old plan. The one is evidence that the pupil is growing, the other simply that he remembers an answer. Which deserves the most credit? No cases will arise in which pupils are ½ per cent. below the arbitrary passing mark, as is often the case in the regular examination.

THE TEST OF ITS VALUE.

I have tested this method for promotion in public school work. It is now used by most of the teachers in the Chico Normal School. It has never failed, in my experience, to produce excellent results on the pupil, leading him to do careful, conscientious work at all times, and inculcating a knowledge not made up of mere text-book answers.

It seems to me the merits of this method for estimating fitness for promotion are manifold. It is educational, developing all of the powers of the mind instead of memory alone. It incites pupils to strive daily to do careful, earnest work, as "cramming" or dishonesty will not help them at the close of the year. It spurs up the dull ones and does not excite those who are nervous.

On the part of the teacher, he is allowed to broaden his work by making use of any knowledge that will aid him in developing the mental powers of his pupils, his main object being to incite thought on their part. Such being the case, he can and should exercise careful

judgment in estimating what a recitation, oral or written, is worth. It allows for individuality in teaching. It takes account of individuality in work, and will never strive to "turn out fifty thousand clothes pins of precisely the same pattern."

It relieves both teacher and pupils from the strain incident to examinations at the close of the term, as the work of the last week counts for no more than does the work of any other.

The teacher must, however, have definite purposes, and definitely planned work for each subject that is taught, to accomplish satisfactory results by the above method. The same kind of work will not always do for different classes. With this variation, there must be no drifting. "The better qualified the teacher is for his position," as President Noss says, "the less need there is for formal examinations." He must know the children, and be able to understand, appreciate and make use of their peculiarities, mental, moral and physical. He must be broadly and professionally educated. Quoting from Pres. Wilson, of Providence, "We must have teachers of character, force, and intelligence, those trained to *teach*, not merely to give *instruction*," who will work "for results in character and scholarship." Finally, as Miss Darrah, of the Teachers' Training School, St. Paul, says, "Give the question of promotion less prominence, and educate the public to regard the development of children of infinitely more importance."

"Little Drops of Water."

Here is a brief account of the woman who wrote the little verse:

Little dróps of water,
Little grains of sand,
Make the mighty ocean
And the pleasant land.

Julia A. Carney is now about 70 years of age. She lives near Galesburg, Ill., with her grown-up sons. The writer recently asked her for a portrait of herself to accompany this sketch. "For nearly 50 years," she replied, with the utmost good nature, "I have given one answer to hundreds of such requests every year, and that has been, and must always be 'No.'" "Little Drops," she continued, "was written by me merely as a class exercise when I was a member of the teachers' class in phonography in the old Tremont Temple, in Boston, in 1845."

METHODS AND AIDS.

Laboratory Physics.*

LILLIE J. MARTIN.

MECHANICS.

EXERCISE I.—LENGTH.†

1. *Apparatus:* Measuring rod graduated in Metric and English systems.

2. *Directions:* Record results as follows.

Trial.	Length of natural step in inches.	Length of natural step in centimeters.
	′ ″	cm.
1		
2		
3		
Average.		

1 in.=how many centimeters?

Estimate the length of the laboratory by the eye and by pacing. Verify results by actual measurement.

EXERCISE II.—BREAKING STRENGTH OF WIRE.

1. Piece of spring brass wire without kinks, No. 26, Brown and Sharpe gauge, about 1 m. long. 25 lb. spring balance. Short spool. Scales. Weights.

2. With one end of the wire, make several turns around the vertical iron support on your table and fasten this end. Fasten the other end of the wire to eye by which the hook is attached to the balance, and then wind it several times around the spool which has been slipped upon the hook of the balance. Now pull steadily with the spring balance, gradually increasing the force and watching the index of the balance. Note and record in tabular form the position of the index when the wire breaks. Repeat three times.

Weigh one meter of the wire and calculate a length that would just break under its own weight, when suspended by one end.

*From a pamphlet entitled "Laboratory exercises in Physics, selected by permission mainly from the Harvard Descriptive List of Elementary Physical Experiments and adapted to the use of the pupils of the San Francisco Girls' High School, by Lillie J. Martin, Head of Department of Science of San Francisco Girls' High School, 1893."

†All exercises are to be worked in the laboratory by two pupils together. Each pupil is to index the experiment in her notebook, but is to write out in full only those exercises marked with Roman numerals. As far as possible write out results in tabular form. Make all computations in the notebook.

Exercise III.—Pressure in Fluids.

1. Scales. Weights. Flask with cork perforated for delivery tube. Pinch cock. Glass jar. Pressure-gauge.

2. A. Pressure in air.

(*a*) Connect flask with delivery tube. Close tube with pinch cock.

Weight of flask filled with air=

" " " after exhaustion by mouth=

" " " of air=

Does air have weight?

(*b*) Cover the mouth of a thistle tube with thin rubber, and connect it by rubber hose to a glass tube. Exhaust the air with mouth. Turn thistle tube in all directions and give reasons which make you think that air presses or does not press in all directions.

B. Pressure in water.

Put thistle tube and attached rubber tubing into the jar of water. Wet inside of glass tube, and leave a short column of water in it near the middle. Use rubber rings as reference marks. Hold the glass tube horizontally.

(*a*) Turn the face of gauge in all directions, keeping its center unchanged in position. Is the pressure at any point in the liquid equal in all directions?

(*b*) Place the guage at various depths in the liquid, keeping its face always horizontal. How is the pressure affected by change of level in the liquid?

Exercise IV.—Compressibility of Air.

1. U-shaped tube with one arm longer than the other and short arm closed. Support for tube. Rubber bands. Measuring stick. Mercury. Barometer.

2.

Trial - - - -	Excess of mercury in long arm - - - -	Ht. Barometer column - - -	P = total pressure on confined air col. i. e. excess of mercury in long arm + ht. of barometer column -	L = length of confined air column. - -	P x L - - -
1					
2					
3					
4					
5					

Pour enough mercury into tube to fill bend 1 or 2 cm. in each arm. Manipulate the tube until mercury stands at nearly same level in the two arms. Read and record results. Then pour in mercury until the column stands about 20 cm. higher in the long arm than in the short arm and record. Add mercury and make three more readings. In fifth reading let the excess of mercury in long arm about equal the barometer column.

What do you observe as to the value of the products, P x L? When P increases, how about L? When P decreases, how about L? State your conclusion from the experiment in the form of a law.

The graphical method of showing results: "This mode of recording and showing the relations of forces to their effects bears the same relation to a numerical statement that geometry bears to arithmetic."

Record the above exercise graphically, using paper divided into squares. Beginning at lower right hand corner, let each division upward along the vertical line represent an increase of pressure of 2 cm. of mercury, and each division towards the left along a horizontal line, a decrease of .5 cm. of confined air column. Locate the point after each addition of mercury and at end of experiment draw a line connecting the points.

Use the diagram in determining whether equal increments of pressure produce equal amounts of contraction in the compressed air column.

EXERCISE V.—DENSITY AND SPECIFIC GRAVITY.

1. Scales. Weights. Measuring rod. Cube of wood.

2.

Material	Length		Width		Thickness		Volume		Weight		Density		Sp. gr.	
	cm.	in.	cm.	in.	cm.	in.	ccm.	cu.in.	g.	oz.	Wt. per ccm.	Wt. per cu.in.	1 ccm. wat'r = 1 g.	1 cu.in. wat'r = .578 oz.

Measure the sides of the block and compute its volume in cubic centimeters and cubic inches. Weigh the block in grams and calculate weight in ounces (1 oz.=28.4 g.) Find the density, *i. e.* weight, in grams per ccm. and in oz. per cu. in. Use Metric and English sys-

tems of weights and calculate the specific gravity, *i. e.* weight of block divided by weight of equal volume of water. Meaning of answer?

EXPERIMENT VI.—BUOYANCY—IMMERSED BODY.

Specific gravity of a body that will sink in water.

1. Scales. Metric weights. Piece of lead. 100^{cc} cylindrical measure graduated in cubic centimetres. Tumbler. Water.

2. (1) Wt. of solid in air (W)=
   (2) " " water=
   (3) Loss of weight of solid (W')=
   (4) Wt. of water displaced by solid (W')=

What do you observe as to the value of (3) and (4)?

Draw a general conclusion from this.

What precautions are to be observed?

Calculate specific gravity (G) of lead.

$$G=\frac{W}{W'}$$

Compare result with sp. gr. of lead given in text-book and point out the causes of error.

EXPERIMENT VII.—SPECIFIC GRAVITY OF A BODY THAT WILL FLOAT IN WATER.

1. Cork. Lead used in Experiment VI to be used as a sinker Scales. Metric Weights. Glass of water.

2. (1) Wt. of cork in air=
   (2) " " and sinker in air=
   (3) " " " " " water=
   (4) " water displaced by both=
   (5) " " " " sinker=
   (6) " " " " cork=

Weigh the piece of cork suspended by a thread alone in the air. Fasten the cork to the sinker by tying them together with a piece of fine thread. Weigh both together under water. Weigh the sinker alone under water. Find the specific gravity of the cork.

EXPERIMENT VIII.—SPECIFIC GRAVITY OF A LIQUID.

1. Bottle, with ground glass stopper. Scales. Metric Weights. Graduated Cylinder. Solution of sulphate of copper. Water.

2. Weigh the corked bottle empty. Weigh it full of water. In each case take care to wipe the bottle and to exclude air bubbles in putting the stopper in. Fill the bottle full of sulphate of copper, cork and weigh. Find the specific gravity of the copper sulphate solution.

Observe the temperature of the water in the bottle, measure its volume and calculate its density. Compare the result with density usually given for water, and explain.

EXERCISE IX.—COMPOSITION OF FORCES.

1. Three spring balances of 25 lbs. capacity. Two pieces of string. Measuring stick.

2. Connect the hooks of two of these balances by means of one of the strings. Attach the other string to the hook of the third balance, and let a loop in the other end of this string pass around the first string so as to slide freely upon it. Put the three balances so connected on a horizontal surface. Fasten balances, one and two, by their rings to nails. Pull now the third balance by its ring in any desired direction; and with such force as to draw the strings tight and so make each balance point in the same direction as the string attached to its hook. Make a careful reading of each balance. Then put a note book beneath the junction of the strings, and under each string draw a line to the scale of ⅛ in.=1 lb. From the end of any of the lines draw a line parallel and equal to any other line. From the end of this line draw a line parallel to the first line and cutting the second line. From the point of application of the forces, draw a diagonal through the parallelogram thus formed. Measure the length of this diagonal, and compare the force represented by its length with the third force.

Make a rule for finding by diagram:

1. The resultant of two forces whose components are known.
2. The two components of a given resultant.

EXERCISE X.—PARALLEL FORCES IN ONE PLANE.

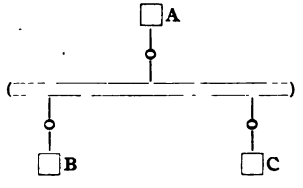
1. Three 25 lb. spring balances. Measuring stick. Strong twine. Support for spring balances.

2.

Trial.	Reading A	Reading B	Distance B	Moment* B	Reading C	Distance C	Moment C
1	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....
5	.....	.....	.....	.....	.....	.....	.....

*"The values obtained by multiplying the magnitudes of parallel forces by their 'leverage,' that is, the distance of the point of application of each force from the same point of reference as, C times distance C A, are called the moments of the forces."

Arrange the apparatus as in figure.



Place A at center of stick and support from rod above table. Slip the loops of the strings B and C to such points on the stick that the distance of each loop from A is 10 cm. Pull down steadily on the two lower balances, keeping the stick horizontal until each balance reads five pounds or more. Read the three balances. Place the loop B in such a position that its distance from A is twice that of C from A. Try three other positions of B and C.

Add readings B and C, and state how the sum compares with A. Compare A, B, and C as to direction. How do the moments of B and C compare in value for each case? Is there any relation between B and C that also exists between distances C A and B A?

Exercise XI.—Laws of Simple Pendulum.

1. Iron ball. Wooden ball. Each suspended by cords from support. Measuring stick. Clock. Strong magnet.

2. Suspend iron ball by a string, 1 m. in length; set it vibrating through a small arc, and determine the number of vibrations made in 60 seconds or one minute. Now cause it to vibrate through a greater arc, and note the number of vibrations it makes in same time. Does the size of the arc affect the time of vibrations?

Put strong magnet under vibrating iron ball. Effect? Should you think change in force of gravity would affect vibrations?

Set up two pendulums of same length, using iron ball for one bob and wooden ball for other. Does material affect time of vibration.

Arrange the length of the pendulum so that it vibrates 60 times in one minute, *i. e.* vibrates seconds. How long is the pendulum? Arrange it to vibrate half seconds. Length? Arrange to make one vibration in ⅓ of a second. Length? Study lengths and find relation between length and time of vibrations?

State laws for the vibrations of pendulums.

Exercise XII.—Inclined Plane.

1. A board about 6 ft. long arranged to give one end any elevation desired, and a pulley fastened to its upper end. Over this pulley, runs a string attached at one end to a 25 lb. spring balance and at other to a roller skate. Measuring stick. Known weight.

2. Place the skate on the plane; secure equilibrium between it and the spring balance, by weighting the balance if necessary. Now

place the known weight on the skate and pull down vertically on the spring balance. Note the number of pounds required to secure equilibrium. Move the skate to any other point on plane. Is same force required? Draw diagram to illustrate this part, using a scale of ½" to 1'. Find work done by using inclined plane, *i. e.* multiply weight indicated by dynomometer, by length of plane. Find work that would be done by lifting weight vertically, *i. e.* multiply wt. by ht. of plane. How do the products compare? Express the law of the inclined plane by means of a proportion What is gained by using this machine? Cause the skate to move up the plane. Note the force required. Does it require more or less force to move it up the plane than it did to balance it on the plane? How do you account for the difference?

EXPERIMENT 1-2*.—Each pupil selects two additional experiments from Gage's Elements of Physics, p. 1-137, and presents them before the class.

HEAT.

EXPERIMENT 3-12.—G.* p. 138; EX. 1, 2. 140.142; 3, 4. 143; 5. 144; 1. 146; 1. 148; 1. 149; 2, 3.

EXERCISE XIII.—TESTING A MERCURY THERMOMETER.

1. Centigrade chemical thermometer. Ice. Water. Bunsen flame. Tin boiler with cover with a hole in it. Tin cup.

2. Fill the tin cup about two-thirds full of ice, broken into fine pieces. Add enough water to fill the spaces between the lumps of ice. Put the bulb of the thermometer into the middle of the cup until the point marked 0° is 1 or 2 mm. above the surface of the water. Give the mercury time to descend as far as it will and then record the reading. What is the freezing point of water? How is the freezing point on your thermometer marked? What is the amount of error in your instrument? After the zero point has been determined, apply a small flame to the cup that contains the ice, and while constantly stirring with the themometer bulb, note the indications of the thermometer as the melting proceeds, and record results.

Fill the tin can half full of water, and place it over the Bunsen flame. From the iron support of table, suspend the thermometer, with the bulb in the water of the can. Let the mercury rise as far as it will, then read the height of the mercury column and record. Read also the height of the barometer column. Why? What is the boiling point of water at 760 ^{mm} pressure? If you do not take

* Gage's Elements of Physics.

into account the difference in atmospheric pressure, what is the error of your instrument?

Now confine the steam in the calorimeter, by putting on cover. Place the thermometer through hole, observe, and explain the effect of such confinement upon the temperature of the steam.

EXERCISE XIV.—EVAPORATION. BOILING.

1. Test tube. Cork. Tumbler. Piece window glass. Water. Bunsen burner.

2. Half fill test tube with water. Hold glass plate just above the top of the test tube; heat water, somewhat, though not to boiling. Notice and record any change in the appearance of the glass plate. Now fill the test tube nearly full of water. Hold the test tube by means of a thick band of paper near the top and gradually heat the water, applying the heat at the bottom of the tube. Raise the water to vigorous boiling, noting carefully and recording the appearance and behavior of the bubbles in the test tube, and trying to distinguish between the bubbles of air and bubbles of vapor. Cease heating the water, and note what happens as it begins to cool. Pour out part of water in test tube, make the water boil vigorously, remove it from flame, cork it quickly and invert. Cool the seemingly empty top of the test tube, by means of a wet rag. Observe and explain the phenomenon resulting. What is the effect of changes in atmospheric pressure upon the boiling point?

EXPERIMENTS 13–17.—G.* 159; 1, 2, 5. 160; 7. 167; 1.

EXERCISE XV.—DEW POINT.

1. A bright tin cup. Thermometer. Ice. Salt. Water.
2. Temperature at which mist first appears=
   " " " " " disappears=
   Dewpoint=

Pour a little water at temperature of room into the cup, and into this put the bulb of the thermometer. Gradually cool this water by small additions of ice and of salt, if necessary, watching the outside of the lower part of the cup after each addition of ice, until the bright surface becomes dimmed. Record the highest temperature at which the mist unmistably appears. Then allow the temperature to rise gradually, and record the lowest temperature at which the mist begins to disappear. Take as the dew point the mean of the two temperatures. To avoid letting the breath come upon or near the cup, during the time, observe some part of cup turned from you, The contents of

*Gage's Elements of Physics

the cup must be stirred continually, during the experiment, in order that the temperature of the cup may be, as nearly as practicable, the same as the temperature of the contents in which the thermometer bulb is placed.

Note and record the state of the weather and of the outdoor temperature, at the time of making the experiment.

Account for the appearance and disappearance of the mist on the cup.

When the temperature of the air and that of the dew point are about the same, what generally happens? Explain.

EXERCISE XVI.—LATENT HEAT OF MELTING.

1. Calorimeter covered with asbestos jacket and having paste-board cover. Ice. Water. Thermometer. Graduated cylinder.

2. (*a*) Weight of water in calorimeter=200 g.
(*b*) Temperature of water in calorimeter=
(*c*) Weight of water after removal of ice=
(*d*) " " ice introduced into calorimeter=
(*e*) Temperature of water after removal of ice=

Put into the calorimeter 200^{cc}; *i. e.* 200 grams of water at a temperature of about 55°. Check the evaporation by covering the calorimeter with the paste-board cover, having a hole to to admit the thermometer. Now put into the calorimeter about 250^{cc} of ice, broken into small pieces. When about ⅔ of the ice has melted, or the water has fallen to 5°, take out the remainder quickly, being careful to remove as little water as possible with it. Take the temperature and volume, *i. e.* weight of the water left in the calorimeter.

(*f*) Find calories of heat consumed, by multiplying (*b-e*) by 200 expressed in *k*.

(*g*) Find calories of heat consumed in raising temperature of water resulting from melting ice to final temperature, by subtracting 0° from (*e*), and multiplying by weight of melted ice, expressed in *k*.

(*h*) Subtract (*g*) from (*f*), to find number of calories consumed in melting ice.

(*i*) To find latent heat of water, divide the answer obtained in (*h*) by the weight of melted ice expressed in kilograms.

What do you find the latent heat of water to be?

What is the true latent heat of water?

If your result does not agree with the true latent heat of water, enumerate the sources of error?

(*To be continued.*)

The Recitation.

W. F. BLISS, PRINCIPAL OF THE COLTON SCHOOL.

[Extract from paper presented at a Teachers' meeting.]

Whatever benefit is derived from a school education is the result exclusively of the work done by the pupil. All the paraphernalia of the school-books, apparatus, kindergarten materials, teachers, etc., are merely for the purpose of stimulating the self-activity of the child in the proper direction and for furnishing opportunity for its exercise. We cannot emphasize this point too strongly. Whatever takes the place of this activity or makes its exercise less imperative is harmful and vicious. The text book that does the work the pupil ought to do should be thrown out and the teacher who permits herself to act as a substitute for lazy and idle pupils should be treated in the same manner. Objects, toys, apparatus should give way as soon as possible to thought and reason. The worst tendency of the modern method of concrete presentation of knowledge is that "children are taught to see but not to observe;" that is, to compare, analyze, symthesize, reason. They are led to *do*, but not to *think*. The result is apparent in pupils who can weave mats, string beads, draw bugs, paint butterflies, model beautiful maps, whittle sticks, join wood and do many other curious and most useful thing, very excellent as means towards certain ends, but yet cannot solve problems involving simple abstractions, nor comprehend the elements of book-keeping or geometry, nor analyze the thought in a simple passage from Lowell.

Many teachers apply the principle that "children learn to do by doing—" exclusively to manual skill and mental gymnastics. These are proper in their places, but we should translate the principle to read—"children learn to think by thinking"—and remember that all manual exercise, save that intended solely for physical culture, and mental gymnastics, which do not assist in developing thought, power, directly or indirectly, should be banished from school exercises. If the development of the self-activity of the child, then, is the immediate end of all school work, the recitation should be moulded and shaped so as to secure this result in the surest and most direct manner.

ITS OBJECT.

The main object of every recitation is, I take it, therefore, to arouse, stimulate and *force*, if necessary, into activity the child's dormant powers of intellect. All else pertaining to it should be subordi-

nate and auxilliary. Whatever is foreign to this purpose should be promptly discarded.

The helpful developing activity, that which causes the mind to grow in power, must take place almost entirely during the study period. It is there, if ever, that the soul's faculties are concentrated, that reason is exercised and new ideas awakened. If these things have taken place, and even with the youngest pupils they must to a degree occur, else we may as well teach a kennell of dogs—it is revealed by the recitation; but it generally requires keen, tactful, shrewd management on the part of the teacher to make the discovery.

The possession of knowledge concerning the subject in hand is not of much value as a test of the pupil's thought and investigation during the study period. He may have gained the facts, glibly recited, at some previous time, by some personal experience, or he may have the ability to memorize easily, and for this reason the work of the recitation should be shapen so as to make it impossible to give memoriter answers or relate pure facts only. This is one of the main objections to the much-abused, topical method. It develops memory of words at the expense of judgment and reason and tends to glorify in their own estimation those in whom verbal memory is strong and thought power weak, for they are not always united in the same individual, and discourage many real thinkers whose memory for details and whose expression are not good.

Questions so shaped that they can be answered by a single word, usually a proper noun, should be avoided since they call for a mere statement of fact and besides by their form generally afford the pupil a clue to the answer. For example, it is much easier for him to answer the question: "What city is situated near the mouth of the river Seine," than, "Where is the city of Havre? Explain why it was located at that place?"

* * * * * *

THE PROMINENT THOUGHT.

The thought uppermost in the mind of the teacher during a recitation should not be, "By what device can I secure an apparently smooth recitation from these ignoramuses," nor, "What impression am I making upon them," but "How can I best ascertain how much time, attention and thought each of these boys and girls has bestowed upon this subject?" Can you do it by giving them a helping hand over the rough places? By asking leading questions? By letting the bright ones ramble over topics, while the dull ones silently tear paper into

shreds? Can you do this by snatching the broken fragments of an answer from a pupil's trembling lips and completing it with a snort of impatience or disgust? Is the real answer to any question you propound of any consequence whatever? If not, should you ever answer your own questions? Do you not often out of sympathy and mortification, assist a struggling pupil to recite? Have you not pupils on whom you dread to call, because of the awful blunders they are sure to commit and do you not neglect them on this account? Is your sympathy well-bestowed, or your sensitiveness in accord with your duty?

Teachers very often complain that pupils do not accomplish the work assigned them; that they are idle and mischievous, and ask for a remedy. I answer that the remedy lies in the manner of conducting the recitation. If you have secured the respect due you from the pupils and can manipulate the thousand secret springs and levers that operate that mighty machine, the recitation, no pupil will dare appear before you with half-prepared lessons or fail to perform his assigned duty.

How may this be accomplished? By holding the pupils rigidly to your standard; accepting nothing in lieu of the work demanded; by exposing and condemning all shams and makeshifts, in concocting which most children are so apt; but above all, by firm, unrelenting *justice* "Render to Cæsar the things that are Cæsar's." If praise is due give it, but not lavishly, lest your abundance dull the edge of appreciation. Make your pupils earn your praise and never let it grow cheap. If blame and censure are deserved, deal them out, but also economically. Husband your criticism. Let the doses be small, but potent. Neither praise nor blame should be allowed to breed contempt by their familiarity or they lose their effectiveness as moral weapons. A remark, brief comment, a shrewdly constructed question, put at the right moment, can generally be made to reveal the success or failure and the causes thereof. Strip each pupil of all artful disguises and let him stand exposed to the bright light of truth. If he is worthy he will enjoy it and gain the admiration of teacher and class-mates. If not, he may brave it for a time, but invariably will finally succumb. You may talk as you please about high incentives and throwing boys and girls and men and women upon their honor and their own responsibility and the like, but after all the most effective incentive I have ever seen from kindergarten to college is a keen, shrewd, energetic teacher. Then is something inspiring about a vigorous, business-like, persevering manager—a sort of vehemence, which is not

noisy nor boisterous, but yet which bears down all obstacles, pushes everything before it, makes no compromises, gives no quarter and leads to ultimate triumph. But little wit is admissible in recitations. Always avoid the side-shows. Much spice in recitations vitiates the natural taste, causes pupils to look for the spice and neglect the substantials, and encourages a reciprocity of wit on their part, which is anything but desirable. * * * * *

An Interesting Exercise and Test.

We are making a study on children's off-hand drawings with a view to determining the steps naturally taken by children in the use of drawing, their lines of interest in the world about them, and their ability to understand the dramatic movement of a little story, and to select the critical moment for illustration.

You will confer a favor upon us if you will have your children, at some convenient period, take pieces of paper and pencils, and, after writing your name and their own, and their age, in one corner, have them listen while you read the following little poem. Then tell them you are going to have them make a picture out of the story, and have them listen while you read it once more slowly through. Then have them draw what they like. Please have no talk to introduce the matter, answer no questions, give no suggestions whatever, and avoid emphasizing any particular part of the story as you read. Then send us all the pictures drawn,—good, bad, and indifferent. The worst are often the most instructive; and this is, in no sense, a test of the children's ability to draw. Please inform me of the time devoted to the drawing; and write on the sheets any generalization or suggestions that may occur to you in looking them over. If any of the children have read the story and seen pictures about it beforehand, the fact should be noted on their drawing.

By assisting us in collecting this material, you will very greatly oblige.

EARL BARNES,
Department of Education,
Palo Alto, Cal.

THE STORY OF JOHNNY-LOOK-IN-THE-AIR.

As he trudg'd along to school,
It was always Johnny's rule
To be looking at the sky
And the clouds that floated by;
But what just before him lay,
In his way,
Johnny never thought about;
So that every one cried out—
"Look at little Johnny there,
Little Johnny look-in-the-air!"
Running just in Johnny's way,
Came a little dog one day;

Johnny's eyes were still astray
Up on high,
In the sky;
And he never heard them cry—
"Johnny, mind, the dog is nigh!"
What happens now?
Bump!
Dump!
Down they fell, with such a thump,
Dog and Johnny in a lump!
That they almost broke their bones
So hard they tumbled on the stones.
Once, with head as high as ever,
Johnny walked beside the river.
Johnny watched the swallows trying
Which was cleverest at flying.
Oh, what fun!
Johnny watched the bright round sun
Going in and coming out;
This was all he thought about.
So he strode on, only think!
To the river's very brink,
Where the bank was high and steep,
And the water very deep;
And the fishes, in a row,
Stared to see him coming so.
One step more, oh, sad to tell,
Headlong in poor Johnny fell.
The three little fishes, in dismay,
Wagged their heads and swam away.
There lay Johnny on his face,
With his nice, red writing-case;
But, as they were passing by,
Two strong men had heard him cry;
And, with sticks, these two strong men
Hooked poor Johnny out again.
Oh! you should have seen him shiver
When they pulled him from the river.
He was in a sorry plight,
Dripping wet, and such a fright!
Wet all over, everywhere,
Clothes, and arms, and face, and hair,
Johnny never will forget
What it is to be so wet.
And the fishes, one, two, three,
Are come back again, you see;
Up they came the moment after,
To enjoy the fun and laughter.
Each popped out his little head,
And, to tease poor Johnny, said,
"Silly little Johnny, look,
You have lost your writing-book."
Look at them laughing, and do you see,
His writing-book drifting far to sea.

Leland Stanford Junior University,
Department of Education, January, 1893.

Little Folks at Play.

Children who drill
Seldom are ill,
For sinking, tiptoeing, and right and left going,
And shooting and clapping, and measured out tapping,
Strengthen their limbs.
Drive away whims,
Makes faces shine brightly, makes spines grow uprightly;
So, I suppose,
Illness all goes.

Children who learn
Bodies to turn,
And bodies to bend low, and noddles to send low,
And elbows to fetch out, and fingers to stretch out,
Seldom look pale,
Delicate, frail,
And seldom are sulky, and seldom too bulky,
And seldom are spiteful, but always delightful.
So, then, we will
Beg leave to drill.

—*Exchange.*

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

Indianapolis and St. Louis.

BY W. R. COMINGS, IN OHIO EDUCATIONAL MONTHLY.

An opportunity was recently afforded me to visit the schools of Indianapolis and St. Louis, and, having in mind the recent criticisms of Dr. Rice in the Forum, I spent one day in each city.

Concerning Dr. Rice's visit to Indianapolis, I found that he spent three or four days in the schools and did most of his visiting before calling on the Superintendent or making known his mission. Then he went to headquarters for further light upon what he had seen. During these days he questioned citizens whom he chanced to meet, and investigated for himself the cause of their praise or blame. He heard recitations and practically conducted examinations.

For myself, I visited all the rooms of two buildings, partly in company with Superintendent Jones and partly not. I passed freely from room to room and returned to some rooms several times.

The conclusion I reached was that Dr. Rice might have praised the schools more highly even than he did. Everything was alive and stirring; the work was invigorating and pleasant; the methods natural and unrestrained. Kindergartens they do not have, but kindergarten methods are observed throughout the course. The concrete and the abstract are happily blended at all points in nll the studies. Each teacher is allowed the greatest freedom of method, but carefully guided by topical outlines, by suggestions from the Supervisors, and by conferences among themselves.

I saw no disorder in the schools and heard no reproofs; but occasionally there was a suggestion that something else might be done than what was being done. I saw not the slightest indication that teachers and pupils were watching each other. Everything were charmingly home-like. Great pains was taken to have the lessons original, fresh, spontaneous. The teachers print from type a great variety of little reading, language and other exercises for the use o their classes. They have the pupils formulate problems for each other to work; when they are too easy, others are required. Paper cutting folding, sewing, clay modeling and molding in sand form the "busy work" of odd hours.

A CONTRAST.

To these children life is real and earnest, and school is a part of it.

In St. Louis I visited two large buildings. The first I chanced upon; the second was recommended as one of the best in the city. The teachers and principal with whom I talked stated that no one knew of Dr. Rice's visit to the schools, or at least knew very little about it. I could not learn with certainty that he called upon the Superintendent.

My observation led me to believe that Dr. Rice described what he saw was common in the schools. The St. Louis schools are petrified. There is no new thing there. They have the kindergartens to be sure, but there has been no progress in Americanizing them, nor are they modified to meet the grades above. Perhaps they should not be: I do not know. And there is not the slightest modification in the first year grade on account of its nearness to the kindergarten. The teachers were not sure that the pupils were able to take up reading or numbers more readily because of the training they had had. The children at seven begin to read and add and count where other children do at six. Thereafter there is no more paper cutting or folding, no more observation lessons, no science or natural history; even physiology is almost entirely ignored. The introduction of language lessons is under consideration at the head office. "But," said the principal who gave me the information, "I do not see how we can get time for it." The reading was no better than in Indianapolis and far less in quantity. In spelling, I heard "mornlng, m-o-r-n—morn, accent, i-n-g, ing, morning." I was told that the syllables were always pronounced. The "toe-marks" are there, painted upon the floors, and all classes recite in perfect "form." In the hallways I noticed many pupsls exiled from their schools. Throughout the teochers and pupils watched each other like guards and culprits. One teacher informed me that discipline was a strong point in the St. Louis schools. The general tone of the schools was severe. One child, spontaneously answering a question of mine, was told to show his smartness by waiting till he had permission to speak.

I have no motive in presenting what is given here other than to state what I saw for the good it may do. It appears that Dr. Rice is holding up a mirror in which we see ourselves with all our imperfections.

Correspondence.

Appreciation.

MY DEAR MR. FISHER:

I have been greatly interested in Prof. Barnes' paper on "Children's Interests," in the February number of the JOURNAL. The conclusions there arrived at with regard to children's definitions of words are a remarkable confirmation of a widely held principle of evolution, that the history of the race is repeated in the history of the individual. This is illustrated in the successive stages of the human embryo, which passes through conditions in many respects similar to those through which the race has passed in its evolution from the lower forms of life. The persistence of myths and folk-lore in the mouth of children is another illustration, and this matter of the conception and definition of words is still another.

It is a well known philological fact that nearly all of the million or more of words in the great Aryan languages are derived from about four hundred and fifty Aryan roots. Now all these roots, without exception, are verbs, showing very clearly that in the childhood of language things were named from what they did or were used for. To take some examples from the words given by Prof. Barnes, *water* is from the root WAD, to wet; *chair*, through the Greek Kathedra, from SAD, to sit; *hat*, from SKAD, to cover: *i. e.* water is what wets, a chair, what is sat on, a hat, that which covers (the head.)

Prof. Barnes tells us as a result of his experiment, that, "in looking at the chart of seven year old children one is struck with the preponderance of the definition of *use*." And again: "the little children are primarily interested in the common objects of the world because of what they can be *used* for or what they can do." That is to say, children think of objects just as the first men who spoke our parent Aryan language in its primitive form thought of them, "because of what they can be used for and what they can do." Children's conceptions are all based upon verbs, just as nearly all the words in our language are derived from verbs.

I do not know positively, but I think it extreemly probable from what Prof. Barnes says of the nature of the definitions, that many of the younger children defined *water*, as "a thing that *wets*;" an *arm-*

chair, as "something to sit in;" a *hat*, as "something to *cover* or put on the head." And in so doing they unconciously held the conception and gave the definition attached to the word when it was first invented by their Aryan ancestors many thousands of years ago.

These studies of children are not only exceedingly valuable for the light they throw upon man's pre-historic past, but will formulate infallible rules for the right methods of developing the minds of children to-day.

HERBERT MILLER,
Marysville High School.

NORMAL SCHOOLS AND STATE UNIVERSITY.

The following important measure was introduced by Senator Earl:

SECTION 1. In order to provide a more general and thorough instruction in the practical sciences in the High Schools, organized under the laws of this State, and including the Normal Schools, an annual appropriation of ten thousand dollars ($10,000) is hereby made to the Regents of the University of California, in trust for the fitting up of laboratories, and the purchase of chemical and physical apparatus for the use of said Normal and High Schools.

SEC. 2. It shall be the duty of the Regents of the University of California, upon receiving said appropriation, to purchase chemical and physical apparatus, and apportion the same to the High Schools and the Normal Schools as herein provided.

SEC. 3. Each High School of this State, organized under and complying with the laws of this State, and which provides a year's laboratory course in physics, and a year's laboratory course in chemistry, and which shall be accepted by the University of California in said branches, is entitled to an annual expenditure of one hundred and twenty-five dollars for the purchase of chemical and physical apparatus under this Act; and each Normal School is entitled to two hundred dollars annually for the same purpose. The balance of the appropriation, which shall remain after the apportionments as above provided, shall be distributed among the different High and Normal Schools in proportion to the number of students enrolled in the classes in physics and chemistry in such schools; all these expenditures to be made in the same manner as other expenditures are made by the Regents of the University of California.

Another bill by Earl:

Sixteen members of the Board are appointed by the Governor, with the advice and consent of the Senate. Their term of office is sixteen years. Whenever any Regent is to be appointed, it shall be the duty of the Governor to make such appointment from the alumni of the University; and thereafter appointments shall be so made as to preserve and continue such majority.

Legislative appropriations needed for the Normal Schools for the two years, July, 1893, to June, 1895.

	For Support.		Library and Museum.		Care and Improvement of Grounds.
San Jose.....	$90,000	.....	$2,000	.....	$3,000
Los Angeles.....	45,000	.....	2,000	.....	3,000
Chico.....	44,000	.....	2,000	.....	3,000

Additional, applied for—

San Jose: $10,000 for a system of heating and ventilation. Chico: $6,000 for fence; $4,000 for additional building. Los Angeles: $75,000 for another school building.

Assemblyman Sargent introduced the following:

The Board of Trustees of any Normal School, or its Executive Committee, may grant permission to the Principal, or any teacher of such school, to attend any County Institute, and give instruction on subjects relating to education in the public schools.

The following Bill was introduced by Senator Gesford:

The sum of two hundred and fifty thousand dollars is hereby appropriated out of the State Treasury not otherwise appropriated, to be paid to the Regents of the University of California, to be expended by them in the erection of buildings, grouped together on such site in San Francisco as the Regents may select and acquire from other sources, for the use of the professional and affiliated colleges, to wit: The Hastings College of the Law, the Medical Department, the College of Dentistry, the College of Pharmacy, Biological Laboratory, University Extension Lectures, and other Departments of the University of California conducted in San Francisco. And the Controller of State is hereby directed to draw his warrants for said sum, in such partial payments as he may be requested by said Regents of the University of California, and the Treasurer of the State is hereby directed to pay the same.

MISS IMOGENE HOWARD, a colored teacher in one of the grammar schools in New York City, has been appointed on the Woman's Board for the World's Fair of the State of New York. Miss Howard is a graduate of the Boston high school, but has been a resident of New York for the last twenty years. She is one of the graduates of the class in pedagogy of the University of the City of New York. Her special work on the board is as a member of the committee on education, of which Mrs. Andrew D. White is the chairman. Their chief duty will be to present the history and progress of education in New York State. Miss Howard is worthy of this appointment, which was unsolicited, and it is a recognition of the right of the colored race to representation at the fair which honors the appointing power vested in Mr. John Boyd Thatcher, the World's Fair representative for New York.

EDITORIAL.

THE article contributed for this number by Miss Martin, of the San Francisco High School, will be found valuable to teachers of elementary physics. She will contribute other articles in future issues.

THE editor has been so busy doing committee work during the last two weeks at Sacramento that matter for this department is short as a consequence.

IN the April JOURNAL a resumé of the educational legislation of the present session, will be given to its readers. While it is not to be expected that the result will be entirely satisfactory, we judge that much will be done that will add to the strength and dignity of the profession.

ARE you going to the World's Fair? Read the advertisement of excursions in the JOURNAL and make up your mind to take advantage of the opportunity to see the world by going to the Fair. It will be a trip never to be regretted. If you fail to go you will always wish you had gone.

THE time for presenting essays to compete for the prize offered in the December and January numbers of the JOURNAL has been extended to March 31st. All essays intended for competition must be in our hands on or before that date in order that they may be referred to a competent committee to examine and make the award.

F. A. MOLYNEAX, City Superintendent of Pomona, has been appointed a member of the Los Angeles Board of Normal School Trustees to fill the vacancy caused by the resignation of Senator Stephen M. White. Mr. Molyneax is well known in educational circles in the southern part of the State. For years he has been an active member of the Los Angeles County Board of Education. At the meeting of the Educational Council in Fresno in December last, he was elected a member. He is a man of energy and push, a fluent speaker and will, no doubt, take a lively interest in the affairs of the Normal School. He is a graduate of the Albany, N. Y. State Normal.

A SCHOLARSHIP of $200 is offered by the Vassar Students' Aid Society to a student passing the best examination for admission to the Freshman class of Vassar College, the examinations to be held in June, 1893. This scholarship covers one-half of all charges made by Vassar College for one year's board and tuition. It is offered as a loan not as a gift, but no interest is asked and no date of payment is fixed. An examination will be held in San Francisco. Applications for this scholarship must be made before April 1, 1893. All applications and all requests for information must be addressed to the Chairman of the Committee on the Announcement of Scholarships, Miss Jessie F. Smith, South Weymouth, Mass.

AT a recent meeting, the Sacramento City Board of Education elected a special teacher of physical culture. The subject is evidently taking a strong hold upon the public, as witness the following Bill introduced in the Legislature by Assemblyman Anderson, of the Capital City: "Attention must be given to such physical exercises for the pupils as may be conducive to health and vigor of body as well as mind, and to the ventilation and temperature of school-rooms. Instruction must be given in all schools, from normal to primary, in all grades and in all classes, during the entire school course, in physical exercises, taught by specially trained instructors, for cities containing a population greater than ten thousand inhabitants.

THE contribution of Principal E. T. Pierce, of the Chico Normal School, on the subject of Examinations and Promotions, is well arranged and shows careful and thorough investigation of the subject. Taken with that of Will S. Monroe, and a short article by Superintendent J. W. McClymonds, of Oakland, which will appear in the April issue, the subject will have received most thorough treatment. California teachers may well feel proud of these first fruits of the Educational Council of the State. This symposium will be found of great value to the hundreds of teachers who have long complained of the barrenness and hurtfulness of a system that had for its chief end the attainment of high per cent. in a supreme mental effort that left body and mind racked and exhausted.

THERE is a growing disposition on the part of the best teachers to lead their pupils from the short, often colorless and unattractive quilt-pattern selections of a reader, into the wider, animated field presented in a story of length, either in book form or published as a serial in a youth's magazine—stories with something of a plot and

full of human experienee. The child loves such stories, and, his interest awakened, will make marvellous progress in reading. Much of this sort of work should be done in second and third reader classes, thus affording the teacher abundant opportunity to throw in such side lights of comment, comparison and historical allusion as will prepare the minds of the pupils for the proper and beneficial study of the literary selections of the final grammar grade and the high school work, that it may, perhaps, be their privilege to enjoy. *The Nursery*, *Our Little Ones*, *Andersen's Fairy Tales*, *Wide Awake*, *St. Nicholas*, *Harper's Young Folks*, naturally prepare for "Enoch Arden," "Evangeline," "The Newcomes," etc. Such instruction followed along the years of primary, secondary, and collegiate training fit the mind for a discrimination between the good and the vicious, the sweet and the impure, the debasing and the exalting, found in the wide and varied realm of literature known under the head of novels.

From the Address of President Hugh J. Baldwin, State Teachers' Association, Fresno Meeting.



"If the schools of one county are in a maturer condition than those of another, it is owing to the better preparation of its teachers. It is a crime against the children of any county, that pays reasonable salaries, if the teachers of said county do not avail themselves of every opportunity of coming in contact with teachers of counties that are conceded to be advanced in educational affairs. No teacher who is true to his own growth, and honest with his constituency, can possibly be otherwise than in touch directly or indirectly with the California Teachers' Association.

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"Only a few weeks ago the Bankers' Association convened in San Francisco for the express purpose of discussing their business relations and enterprises; yet our vocation was considered by them of

sufficient importance to call forth an able address on the 'Necessity of High Schools Devoted to Instruction in Business.' It is our duty to ascertain what these gentlemen desire in the training of youth. They are eminently qualified to judge of the practical value of the results of our labors, therefore their suggestions should receive due attention."

* * * * * * * *

"I desire now to call your attention to some matters, that have much to do with the prosperity of the organization. Since specialists in music, drawing, kindergarten and so forth, are becoming quite numerous in our State, and since application has been made during the year to grant opportunities for the assembling of specialists; therefore I advise that arrangements be made, or a department be formed, for this class of teachers to assemble and discuss their specific line of work."

* * * * * * * *

"While perusing the minutes of our organization from its infancy to the present time, I discovered excellent resolutions passed by this body, with no results apparent and evidently soon forgotten. I will mention, however, two suggestions originating in our Association which have been taken up by other hands and are now bearing rich fruit, in spite of our neglect.

"On October 22, 1877, it was resolved 'That it is the sense of this Association that the Legislature should further the establishment of kindergarten schools, and encourage them by appropriate legislation."

"Thirteen years afterward, or two years ago, the matter was properly placed before the Legislature by a committee appointed at the Biennial Convention of County Superintendents. Now it is a part of the State school system. Again, in December 1879, it was resolved by this Association, 'That the State Superintendent of Public Instruction be, and is hereby requested to propose to the Legislature of the State a measure for the establishment and endowment at the State University of a Chair of Pedagogics.' That chair is now established. If we mean business when a resolution is passed by this body, we should select an energetic committee to see that it is carried into effect.

"'In unity there is strength.' The teachers in every school district in the State have their faces turned toward this Association, expecting from its deliberations brighter and wider prospects than heretofore came within their range of vision, as well as aid in solving the sublime problems of education, that confront every intelligent teacher.

Well they know that this organized body, marshalling the forces at its command, is able, on the one hand, to explore and survey the new territories of educational thought of the day, and map the same for the teachers use; and, on the other, to obtain justice and equal rights and benefits, such as are conceded to any other skilled class of laborers in the industrial structure of this age of civilization.

"The trained and educated woman, who has been pronounced competent to discharge the duties of teacher by a qualified and legalized Board, should not be subjected to the humiliating position in which she frequently finds herself on moving to another State, or from one county to another, or from country to city. This is wrong, and should be remedied. I am convinced, that the most direct way of obtaining freedom from this predicament, is for all to be professionally trained on entering the school-room. The Normal schools have this mission to fill, and, being a part of the public school system of the State, tuition being free, they should be attended by everyone who intends to become a teacher; and the paper, issued by the Normal school, should be prima facia evidence of qualification to teach, and no other license should be required; furthermore, the degree granted by the chair of pedagogics in our Universities, or in any other recognized institution with such a chair, should be a passport to the highest school-room in the State."

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"I believe that the San Francisco Convention of the National Educational Association helped us wonderfully to this acquisition; it also stimulated the teachers of the State with higher ideals of the profession. I remember well the intentions of the young men who entered the ranks in this State some fifteen or sixteen years ago. Not one do I know that intended to make it a permanent occupation. What a change of front now presents itself, with Superintendents, members of County Boards of Education, excellent principals and teachers, resigning their positions in order to pursue higher professional training in our Universities, or in other places of high culture!"

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"It may readily be discovered, that some prerogatives granted to County Boards of Education, and not conducive to the progress for which the genius of California is well known, owing principally to the lack of that broad professional courtesy so apparent between the licensing authorities of law, medicine and theology. Who is not

roused to indignation on reading in the September number of our JOURNAL OF EDUCATION a communication on the refusal of a certificate to the holder of a Life Diploma? Consider also the demoralizing influence of the serious rupture in the Santa Barbara County Board o Education over the issuing of two certificates.

"On comparing these 'Rules and Regulations' of County Boards, I found uniformity existing only where it was required by the State law. Our astonishment reached its climax, however, on discovering the protective tariffs levied by counties in favor of their local teachers. For instance, Monterey requires a standing of 85 per cent. in the examination of teachers; but if a teacher comes from an adjoining county, he must present a certificate of 88 per cent., or 3 per cent. more than is required of the local applicant.

"Again, Los Angeles requires a standing of 80 per cent. from its applicants; yet it requires 85 per cent. from the rest of the State, thereby laying a 5 per cent. duty on the certificated teacher from other counties.

"The Alameda County Board is more graceful in this discrimination by these words, 'Certificates will be granted without examination, on certificates, approved by the Alameda County Board, of those counties, cities, and cities and counties, which recognize the certificates of Alameda, and that have been issued in accordance with the requirements of this Board.'

"All other County Boards must conform to Alameda requirements or their papers are of no value there; yet these are among the most magnanimous Boards in the State."

"There is one professional courtesy that County Boards usually bestow, that is the recognition of papers granted by the State Board of Education; and on closer study of this concession, we observe indices that Boards of Education are looking only to professionally trained men and women, as qualified to receive consideration. This is evident, as an Educational Diploma carries with it five years experience, and the Life Diploma ten."

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"With this object of uniformity in view, I inquired of each county Superintendent in the State, if he thought his County Board of Education would accept and adopt a uniform series of questions issued by the State Board of Education.

"To this, objection was raised by a few who detailed the scandal in the last examination, held by the old State Board. It is unneces-

sary for us to resurrect this old discussion, but, fellow teachers, what seems strange is this: it is never for a moment considered, that the opportunity of that dishonest employee of the State Capitol is multiplied by fifty-four, and for twelve years we have been in sackcloth and ashes for the sins of that dishonest *clerk*.

"I am pleased to announce, however, that a large majority of the answers to my communications are strongly in support of the proposition and many of the County Boards, most unwilling to recognize credentials issued by other County Boards of Education, are among the warmest supporters of the movement to return all the old prerogatives to the State Board of Education."

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Keep Them Busy.

The Square of Archimedes:

22	21	13	5	46	38	30
31	23	15	14	6	47	39
40	32	24	16	8	7	48
49	41	33	25	17	9	1
2	43	42	34	26	18	10
11	3	44	36	35	27	19
20	12	4	45	37	29	28

It will be observed that it contains all numbers from 1 to 49 inclusive, and that no number is repeated. Write the form on the blackboard and give it as an exercise in addition for an idle or dull pupil. Add the numbers vertically and horizontally.

Official Department

J. W. ANDERSON, - - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - Deputy Superintendent of Public Instruction

THE following decisions have been rendered in this Department since those reported in the February number of the JOURNAL:

441. The expression "within two miles of any district school-house" refers to the same county, except in the case of joint districts. Under the law as it now is, a new district cannot be formed that is less than two miles from a school-house in the same county.

442. Boards of Trustees are at liberty to use only so much of the County Fund as may be necessary to furnish such supplies as are absolutely necessary for the support of the school until after an eight months' school has been maintained. After the eight months' school the County Fund may be used for any of the purposes specified in the School law.

442. The law requires Boards of Trustees to employ janitors, and directs the Superintendent, in case they do not, to appoint.

443. The janitor of a school has no right to open the rooms of the school building for the admission of pupils. In order that the school property may be properly cared for, the janitor should be held responsible, and the rooms should not be left in such condition that any parties can enter them, except under the notice of the Principal or teachers. The Principal has, and of right ought to have, the charge of the school building. It would be entirely unreasonable to say the Principal should not have keys to the rooms of the school building. The Principal has the right to direct the janitor in reference to his work. For any Board to make a rule making the janitor independent of the Principal would be unreasonable and wrong.

443. Any male citizen who has been a resident of the State for one year next preceding an election, of the county ninety days, of the election precinct thirty days, and who has his name on the great register of the county, is entitled to vote at any school election.

444. There is no provision of law that will authorize Trustees to postpone a meeting of the qualified electors called for the purpose of changing the location of the school-house.

445. The Board of Trustees are bound by the instructions of the district meeting relative to the changing of the location of the school-house; and there is no provision of law by which the Board can locate the building.

446. A new district cannot obtain any part of the funds apportioned for the year in which said new district was formed. If the school is opened in the new district prior to the first day of July in the year in which it was formed, it must be supported by private means until the 1st day of July.

447. When a school district is divided by the formation of a new district, the new district is not entitled to any property belonging to the original district.

448. County and City Boards of Education have no right or power to revoke a certificate without the knowledge of, and without due notification to, the holder thereof. No court in the land would sustain any such action.

449. No party can be employed to teach vocal music or any other branch in the public schools, unless such party is the holder of a legal certificate in full force.

The Omnibus School Bill is now before both Houses of the Legislature, and will doubtless pass. If it does it will not be possible to have the law ready for distribution before sometime in April.

The sending out of supplies from this office will be necessarily delayed, but I feel sure will reach all Superintendents in time for distribution among their districts. If the new law is adopted, some changes will be rendered necessary, and this will entail some delay in printing the blanks.

The brutality of English electors is shocking. They often beat a candidate so that he is laid up for days. In civilized America we merely blast his reputation for life and let him go.—*New York Herald.*

The *Pittsburg Times*, it is said, has announced that early in next July it will charter the finest train of Pullman palace vestibuled cars that can be obtained and transport fifty of the public school teachers of Western Pennsylvania, Eastern Ohio, West Virginia and Maryland to Chicago for a ten days' visit to the World's Fair. Arrangements will be made for the entertainment of the party at the best hotel in Chicago. Each member will be supplied with tickets of admission to the Fair and an elegant luncheon will be served to them on the grounds. All the expenses of the trip will be paid by the *Times*.

An inspector in England said to the history class, "Describe some effects of the proceedings under Queen Mary." A glib pupil replied, "Many of the bishops were deprived of their sees." The inspector asked the meaning of the statement. After a long pause one of the boys put up his hands and said, "Had their eyes put out!" Not bad that!

CALIFORNIA SCHOOL ITEMS.

THE Yolo County High School building will cost $17,000.

PRESIDENT CROOK, of the University of the Pacific, has resigned.

THE fine new school-house at Paso Robles will soon be completed.

SUMNER, Tulare county, wants to raise $15,000 for a new school-house.

THE new school-house at Plano will be ready for occupancy next term.

A UNION high school for Esparto and adjoining school districts is contemplated.

THE Sonoma County Institute will be held in Santa Rosa, beginning Monday, May 1st.

THE teachers of Tulare county sent Prof. John Dickinson a handsome Christmas reminder.

UNION school district, San Luis Obispo county, has voted bonds for increased school facilities.

THE people of Santa Ana are discussing the matter of establishing an accredited high school.

REPORTS from various counties indicate the formation of a large number of new school districts.

THE handsome new building of Yorba School District is nearly finished, and is a credit to the community.

THE Union High School proposition was defeated in Gilroy and adjoining districts by a vote of 163 to 49.

SAN DIEGO municipal conventions have nominated several women candidates on the city Board of Education.

THE Alameda city Board of Education has purchased a lot for the new school-house to be erected this summer.

O. T. BARON, of the California Academy of Sciences, has one of the most complete collection of butterflies in America.

THERE are 10,000 specimens of fungi in the California Academy of Sciences, of which more than 300 are new to science.

MISS CORSON, well known throughout the Coast, will have charge of the cooking school exhibit at the World's Fair.

THERE are but seven States that have as many students as California in attendance at the higher institutions of learning.

THE Catholic School exhibit, now being held in San Francisco, comprises work from every Catholic school in the State.

MISS HENRIETTA A. BANCROFT, Ph. M., who did good work as principal of the Riverside High School, is in Europe for study.

WOODLAND has 654 pupils enrolled in the public schools. The kindergarten department has been supplied with a complete outfit.

VAN DUZEN District, Humboldt County, offers $3,000 bonds for sale, the proceeds to be devoted to the erection of a new school-house.

PROF. W. R. DUDLEY, of Cornell University, has been elected professor of systematic botany in the Leland Stanford Junior University.

H. M. SAVAGE, formerly a teacher in the public schools of Tulare, is superintendent of the Indian Industrial School at Perris, San Bernardino county.

THE site for the Ukiah High School has not yet been determined, and the Board of Supervisors has appointed a new committee to make the selection.

E. E. WOOD, of Stockton, aged 17, was the successful applicant at the recent examination for the West Point cadetship from the second congressional district.

THERE are 128 Indian children attending the Industrial School at Banning; 82 are boys, and 46 girls. The grounds comprise 80 acres, 35 acres being orchard and vineyard.

JUDGE BUDD decided in favor of the Stockton City Board of Education in their suit to require the County Treasurer to pay over the money apportioned the city schools in a lump sum.

THE entire Board of Trustees of Rincon district, Sonoma county, is composed of women. The school-house has recently been improved, and is pronounced one of the handsomest in the State.

IN the suit of several tax-payers against the Antioch High School District, Judge Jones has decided that the protesting and contesting tax-payers must pay their taxes for the support of the school, together with costs of suit.

THE San Diego County Teachers' Institute will meet at Escondido, Monday, March 27th, and continue in session until the 31st. State Supt. Anderson, Dr. Jordan, and Prof. Brown, of the State University, and Prof. Barnes, of Stanford, will lecture.

EX-PRESIDENT HARRISON will deliver a series of lectures on law at the Stanford University. A profound student, master of a pure diction, and with abundant tact as an instructor, we predict that the ex-President will take the highest rank as an educator.

PRINCIPAL BURKE, now in charge of the Sonoma public school, is a graduate of the State University, and a post-graduate of Stanford University. Principal Crawford, his predecessor, contemplates going into business in the East, hence his resignation.

PROF. ALLEN reports an increased interest in the educational exhibit to be made at the World's Fair. Many counties are sending in the work, as suggested by the Educational committee. The entire exhibit should be in Chicago early next month.

JUDGE LORIGAN, of San Jose, has decided that the action of four members of the city Board of Education (a majority of the members present) in electing Miss Alice B. Malloy to a position in the department, was legal, although in contravention of a rule of the Board requiring five votes to elect.

THE class of '94 of the Union High School at Haywards has a regular organization, with officers, etc. The constitution pledges the young men to the good repute of the school; to the practice of civics, to mutual aid and improvement; assistance to any who need aid in efforts for higher school education; encouragement in athletics. Officers change every month for benefit in practice.

THE *Plumas National-Bulletin* says that investigations show that Ex-Supt. Foss was undoubtedly a defaulter and a forger when he surrendered his office after proofs of his intoxication were established, and that he is now supposed to be in the Sandwich Islands, or in some other foreign country beyond the reach of the law. The grand jury is having his books experted to determine the amount of his defalcations.

SCHOOL APPORTIONMENT.—January 11th, State Superintendent Anderson apportioned $1,902,393.51 to 294,033 school census children, being $6.47 per capita. Of this sum $224,281 was received from poll tax; $88,751.24 from interest on bonds held in trust; $35,291.45 from interest on school lands; $35,839.01 from tax on railroads; the remainder was received from property tax. Russia appropriated last year $2,892,000.

AT three of the nine conferences on the curriculum of secondary schools held in and about Chicago during the holidays, three California school men were represented: Natural History—Professor Douglass H. Campbell, of the Leland Stanfore Junior University; Geography—Mr. Alexander E. Frye, Superintendent of the San Bernardino schools; English—Professor Cornelius P. Bradley of the University of California.

THE SIERRA CLUB.—A unique organization incorporated June 4, 1892, John Muir, president; Wm. D. Armes, of the University of California, secretary. The main purpose of the corporation is "to explore, enjoy, and render accessible the mountain regions of the Pacific coast; to publish authentic information concerning them; to enlist the support and co operation of the people and the government in preserving the forests and other natural features of the Sierra Nevada Mountains."

THE Hopkins-Searles building in San Francisco has been formally turned over to the State University. Mr. Searles will give $5,000 a year for five years for the maintenance of the property. The Art Association will move into the building immediately, and one day in the week it will be opened to the public. The Board of Regents will move their office to this mansion of Nob hill, and it is stated that the extension courses in San Francisco will also be given there, which will save considerable rent money.

OAKLANDERS will soon be able to show their public school-buildings to strangers without apologizing for the shabby, warehouse-like appearance of the same. The old buildings are being remodeled and modernized and five new buildings will be erected this year. Supt. McClymond's term of office expires this month. Owing to the mixed condition of municipal politics—there being five tickets in the field—it is uncertain who will be selected for Superintendent by the incoming Board of Education.

FROM State Superintendent Anderson's Biennial Report, December 15, 1892: The schools were maintained an average of 7.95 months throughout the State in

1892. There are now 5,891 teachers employed in the public schools, an increase in two years of 457. Of this number 1,516, or 25.71 per cent. have had professional training in Normal Schools, 1,134 being from California Normal Schools. There has been a decrease in the attendance at private schools. The valuation of school property is more than fifteen millions. 238,106 school children were enrolled in 1892. The total expense of maintaining the schools for the past two years has been $10,464,391.85. There are in the State 20 city High Schools, 1 county High School, and 37 union High Schools.

GEORGE W. LICHTENTHALER, of Bloomington, Ill., left his entire collection of curiosities to the University at Palo Alto. Mr. Lichtenthaler had devoted the most of his time for the last twenty years to a study of conchology and marine botany, and he succeeded in gathering the finest private collection of shells, marine plants and ferns in the world. He made many journeys to this Coast, and explored almost the entire coast from Alaska to the isthmus. From the Sandwich islands, and from the archipelago of the Pacific he brought many of his rarest treasures. His money and his time were devoted to it, and his collection comprises many of the rarest specimens known to the scientific world. Everything Mr. Lichtenthaler found he carefully analyzed and classified scientifically, and then added the toil of completely cataloguing the whole collection, thus increasing its value many fold. His specimens of seaweed, water plants and ferns are well mounted, and his shells will be of great assistance in the study of marine animal life.

OUR LIBRARY TABLE.

MAGAZINES.

PERHAPS the most notable special article in the current number of *St. Nicholas* is that of Mr. Talcott Williams upon "Philadelphia." This paper is one of a series describing the more important cities of the United States. Mr. Williams gives as a sub-title, "A City of Homes," and makes this his text for the declaration that Philadelphia is in certain respects the most successful of American cities.

THE *Century* for March contains a unique feature in an account from the manuscript of Captain Thomas Ussher, R. N., of "Napoleon's Deportation to Elba," in which is given a familiar account of all the circumstances of the trip, and a careful report of Napoleon's frank comments on men and events. The article is preceded by a portrait and a short sketch of Captain Ussher, who was the officer in charge, and on the frontispiece of the magazine is an appropriate engraving from the bas relief of Napoleon, by Boizot. Napoleon's comments on Blücher, and on the proposed invasion of England, are particularly interesting. The paper has historical value as well as popular interest.

THE *New England Magazine* has a varied and excellent table of contents for February. "A Biographical By-path Through Early New England History," is an interesting contribution; "Kentucky's Pioneer Town," "Fayal," "The Pilgrim's Church in Plymouth," "The Story of a New England Parish," are all of deep interest to the student as well as the general reader.

THE *Overland Monthly* for March is an excellent number, and sustains its reputation as a first-class magazine, although the price is but $3 per year.



HENRY DURANT,
President of State University, 1870–72.

THE

PACIFIC EDUCATIONAL JOURNAL.

Official Organ of the Department of Public Instruction of California.

VOL. IX. APRIL, 1893. No. 4.

CURRENT EDUCATIONAL THOUGHT.

THE schools will inevitably be a reflex of the noble, cultured, moral characters of the instructors.—JAMES M. KING, Secretary National League American Institutions.

THE aim of the High School teacher is not to store the mind with a multitude of facts. After a few years the facts leave us and nothing but the impression left upon the mind remains. Education is the calling out of the faculties of the mind, the evolution of our power. The training of the intellectual powers gives man his authority; it makes the difference between the educated and the uneducated man. The intellectual powers are best developed, first, by the training of the discriminating and perceptive faculties. Natural sciences and languages are the studies best adapted for this. Second, the reasoning faculty is perhaps best developed by the study of mathematics; the results are absolute. The judgment must be employed. Third, the judgment, the ability to take large, comprehensive views of things, no study is equal to history in developing this faculty.—PRES. C. K. ADAMS, University of Wisconsin.

From the Department of Superintendence of the National Educational Association, February Meeting.

AARON GOVE, Denver:

The best and surest post graduate course for a normal school graduate is a season in charge of a country school.

SUPERINTENDENT HENRY SABIN, Editor of the *Iowa School Journal:*

No greater misfortune could befall the country schools than an adoption of the system governing city schools.

JAMES L. BLODGETT, of the National Census Bureau:

Reading in the schools could be made infinitely more effective by replacing all meaningless reading lessons with material of intrinsic worth. Books ought to be used which are not merely mechanical, but will be read and discussed at home.

PRESIDENT ELIOT, of Harvard:

We prevent a child from getting at algebra and geometry until it is 15. What subject is there of more importance to the American mechanic than geometry? Yet 99 per cent. of the boys who are to become mechanics are prevented from touching geometry by our school programmes. These conditions are intolerable, and we in the interest of the republic and in the interest of American education, must take hold of the reform of such things with all our might.

GOVERNOR RUSSELL:

The public school system to do more useful work must be progressive in idea, instruction, and method, must recognize changed conditions and new wants and wishes. Manual education, at least in some communities, ought to be a part of the school system. The system, too, must be broad and liberal, of tolerant spirit and control, welcoming all to its benefits without distinction of race, class or religion, so does it become what it was meant to be by the founders of it—a great democratic institution.

SUPERINTENDENT ALBERT P. MARBLE:

The blame for faulty English cannot always be laid to the schools. The study of English has been defective; let us find a remedy. In France one-fifth of the time is used in studying the French language and literature. If the English language was to occupy as large a proportion of the time in our school curriculum, the education of our children would be greatly improved. For there is no other study in the whole course which may be made a better instrument of culture than the study of English. It concerns itself with close and accurate thinking, and this kind of thinking is the very end and aim of education.

SUPERINTENDENT ANDREW S. DRAPER, Cleveland:

In all organizations for school purposes in great cities, the following principles should be observed:

The elimination of politics from the selection of school boards, or at least from the administration of the schools.

Small school boards with members representing the whole city and not wards or districts.

The complete separation of school administration from municipal business.

That the school system of a great city must not only have an autonomy of its own, but its administration must be separated into suitable departments. Material affairs should be entirely apart from the work of instruction.

GENERAL DEPARTMENT

Honor to Washington.

BY H. C. KINNE.

Tune:—"Hail to the Chief."

Honor to Washington, soldier the bravest,
Hero triumphant in warfare's grim art,
Pillar of safety in dangers the gravest,
Idol of every American heart;
Winning a deathless name,
Crowned with eternal fame,
Looming more grandly as ages shall glide,
Blazoned on starry flag,
Graven on mountain crag,
Washington, ever America's pride.

Honor to Washington, statesman the ablest,
Guardian of Nation in infancy's days,
Founder of freedom on basis the stablest,
Guide to our footsteps through perilous ways.
Girt now with giant might,
Dowered with happiest plight,
Long may his country in glory abide,
Voicing in thunder sound,
Echoing world around,
Washington, ever America's pride.

Honor to Washington, patriot the purest,
Servant whose service was free as the air,
Ruler resinging a grasp that was surest,
Model immortal of virtues most rare.
Join then in loudest shout,
Fling all your banners out,
Roll your glad anthems o'er continent wide,
Swelling in chorus grand,
Reaching most distant land,
Washington, ever America's pride.

San Francisco, Feb. 22, 1893.

The Best Education for Young Men.

I believe that in the schools of applied science and technology, as they are carried on to-day in the United States—involving the thorough and most scholarly study of principles directed immediately upon useful arts, and rising, in their higher grades, into original investigation and research—is to be found almost the perfection of education for young men. Too long have we submitted to be considered as furnishing something which is, indeed, more immediately and practically useful than a so-called liberal education, but which is, after all, less noble and fine. Too long have our schools of applied science and technology been popularly regarded as affording an inferior substitute for classical colleges to those who could not afford to go to college, then take a course in a medical or law school, and then wait for professional practice. Too long have graduates of such schools been spoken of as though they had acquired the arts of livelihood at some sacrifice of mental development, intellectual culture and grace of life. For me, if I did not believe that the graduates of the institution over which I have the honor to preside were better educated men, in all which the term educated man implies, than the average graduate of the ordinary college, I would not consent to hold my position for another day. It is true that something of form and style may be sacrificed in the earnest, direct and laborious endeavors of the student of science; but that all the essentials of intellect and character are less fully, or less happily achieved through such a course of study let no man connected with such an institution for a moment concede.

That mind and manhood alike are served in a pre-eminent degree by the systematic study of chemistry, physics and natural history has passed beyond dispute. The haste with which the colleges themselves are throwing over many of their traditional subjects to make room for these comparatively new studies, shows how general has become the appreciation of the virtue of these, when combined with laboratory methods, as means of intellectual and moral training.

I have spoken of the characteristic studies of the new schools as the best of all available means of both moral and intellectual training. I believe this claim to be none too broad.

The sincerity of purpose and the intellectual honesty which are bred in the laboratory of chemistry and physics stand in strong contrast with the dangerous tendencies to plausibility, sophistry, casuistry and self-delusion which so insidiously beset the pursuit of metaphys-

ics, dialectics and rhetoric, according to the traditions of the schools.

Much of the training given in college in my boyhood was, it is not too much to say, directed straight upon the arts which go to make the worse appear the better reason. It was always an added feather in the cap of the young disputant that he had won a debate in a cause in which he did not believe. Surely, in these more enlightened days, it is not needful to say that this is a perilous practice, if, indeed, it is not always and necessarily pernicious. Even where the element of purposed and boasted self-stultification was absent, there was a dangerous and a mischievous exaltation of the form above the substance of the student's work which made it better to be brilliant than to be sound.

Contrast with this the moral and intellectual influence of the studies and exercises I am considering. The student of chemistry or physics would scarcely know how to defend a thesis which he did not himself believe. In that dangerous art he has had no practice. The only success he has hoped for has been to be right. The only failure he has had to fear was to be wrong. To be brilliant in error only heightened the failure, making it more conspicuous and ludicrous. —FRANCIS A. WALKER, President of the Massachusetts Institute of Technology.

[Apropos of above article and that of Miss Martin, read the following:]

The Association of Colleges in New England have recommended the following changes in the course of study in the primary and grammar schools.

1. The introduction of elementary natural history into the earlier years of the programme as a substantial subject, to be taught by demonstrations and practical exercises, rather than from books.

2. The introduction of elementary physics into the later years of the programme as a substantial subject, to be taught by the experimental or laboratory method, and to include exact weighing and measuring by the pupils themselves.

3. The introduction of elementary algebra at an age not later than twelve years.

4. The introduction of elementary plane geometry at an age not later than thirteen years.

5. The offering of opportunity to study French or German or Latin, or any two of these languages, from and after the age of ten years.

Some Unrecognized Duties.

ANNIE C. WEEKS, SACRAMENTO, CAL.

Is it within the bounds of possibility that for teachers there still remain unrecognized duties?

If we fulfill one that is often dwelt upon, we read, with tolerable regularity, some educational magazine, some literary magazine and the newspapers of the day. As a result of such reading, together with a receptive consideration of the opinions of people in general, we know that on us rests the responsibility of the child's future, physical, mental and moral; that we ought to do more for him than nature has done, than his parents are doing, than he himself will ever think it necessary to do. We must so conduct ourselves that he will be inspired with wholesome fear, with unbounded respect, and with adoring love. We must so arrange matters that for the children whose parents dislike to see a lesson studied, there shall be no home-work to be done, while for the equally numerous class whose parents feel that very little is being accomplished unless the children study long and faithfully, there shall be assigned lessons enough to keep the pupils busy for an hour or two every evening. Of course it is understood that all the pupils in the class must of necessity perform exactly the same work, and must be brought up to the same standard, completing thoroughly the course of study prescribed by the Board of Education.

We are to have frequent public exercises, and public taste demands that such exercises should be quite elaborate and extremely varied, and, more than all—new. The desired results in that line require hours of patient search for selections, dramatic and musical, hours of careful training, and innumerable rehearsals.

The esthetic side of the child's nature is to be assiduously cultivated, and our school-rooms are to be bowers of beauty, and exemplifications of the refining influences of high art. Flowers are to bloom along the rugged paths of learning; the works of the old masters (at popular prices) are to decorate our walls; and art drapings are to soften, if not hide, all that might offend the sensitive eye. These are not unpleasant duties, but their fulfillment requires time.

OUTSIDE DUTIES.

Incidentally we are expected to "personally conduct" our classes to fairs, loan exhibitions, and "shows" of all kinds. We must hold ourselves in readiness to be ordered out as deputy marshals in case of

any public demonstration in honor of anybody, living or dead, foreign or native born, and must "march on" to discomfort and often suffering —if neither to victory nor death.

"Above all, and over all, and through all," "at all times and all places," "in sickness and in health," we must correct papers and mark them, and register standings; and as soon as one set is completed hurry on to another. When a grammar school teacher goes home without a roll of papers in her hand she feels very much as she might if she had left her hat hanging on its hook, or had accidentally started without her shoes.

I have said nothing about the actual teaching of the various studies; nothing about questions of discipline. It goes without saying that they are to be attended to, faithfully and conscientiously—some time. They are never to be neglected; they are never to interfere with anything else. It is the old story of the mint and anise and cumin, and the weightier matters of the law. "These ought ye to have done, and not to leave the other undone." Just at present it is often hard to decide exactly what constitute the weightier matters, and what are to be considered the mint and anise and cummin; so we rise to the occasion and solve the difficulty by trying to accomplish everything, with what success we sometimes almost fear to ask ourselves.

ALTHOUGH TEACHERS, STILL HUMAN.

The fact that aside from being teachers we are at the same time human beings, adds some further complications. The burdens of our common humanity press as heavily upon us as upon the women who are sheltered in homes and surrounded by the protections of home life. Each one of us has an existence apart from her life with her pupils—an existence with its own anxieties, its hopes and fears, its joys and sorrows. And when the shadow of sickness or death or grievous sorrow has come solemnly near; has bent over a teacher through the long hours of the weary night; has walked close beside her as she turns her feet toward her school-room; has almost shut out from her saddened eyes the sun's glad light and the sky's divine blue, sometimes it insists on being her companion even longer; insists on passing the barrier of the schoolroom door and haunting her with its chilling presence. She is fond of her pupils and of her work; she knows her duties. She knows that she should never be irritated; that no impatient word should ever escape her lips, but sometimes uncalled-for insolence, or still more exasperating trifling, is more than her al-

ready over-taxed powers of endurance can bear, and the crime is committed—the impatient word is spoken. Very possibly, with similar provocation, it would have been spoken much sooner and with more emphasis in the child's home, but there it would not have been a crime, while uttered by a teacher it is commented on in many a home, not always very mercifully. If we could only by some device be transformed into patent teaching machines perhaps everything would be easier. It certainly would be simpler.

The fact that, in spite of our manifold and most thoroughly recognized duties we still live; that our hair does not turn gray in a single night, nor our shoulders bend at once under their burdens; that many of us are occasionally known to smile, and that there are a very few of our number who can pass along the streets without hearing the small children say to one another in tones of conviction, "There goes a school teacher," speaks well for the strength and vigor and elasticity of the average American constitution. The fact that one of your number dares to stand before you and talk of further duties speaks volumes in regard to her opinion of your patience and good temper.

THE THREE IMPORTANT DUTIES.

Those points upon which I shall venture to touch may be summed up in three general classes—the duties of organization, of mutual aid and of occasional emphatic though respectful protest.

I do not mean that we should organize with the idea of holding frequent meetings. Few of us could find time for anything of the sort. Neither does it seem to me advisable that we should form an organization tor the purpose of social intercourse. Each one of us has her own circle of acquaintances, some of whom are teachers, while some are found among those who naturally talk of other than school matters, and so help keep us in touch with the interests and feelings of the world in general. I fancy that personal taste and personal needs will prove the best guides in such matters, and that it would be of little use to create another social duty, while those that already exist for us are being sadly neglected.

But in one meeting we could organize so that in any matter of common interest we could act together. We could elect as President some one of calm judgment, and good, sound, common sense; some one who would not grow excited over nothing, and who would call a meeting only when the exigencies of the case demanded it. We could elect as our other officers teachers from the half-day classes, because,

while they have the same interests as the rest of us, they have, perhaps a little more time at their disposal.

MUTUAL AID.

So organized, we should be able to think about the question of mutual aid. At present, if a teacher is ill, she is treated as if she had committed a high crime and misdemeanor. She is fined to the full extent of her salary by the board, and she is left severely alone by her associates. If she dies, unless she has the forethought to arrange matters as to be buried on Saturday or Sunday, she must still remain alone, so far as we are concerned. This is not an exaggeration. I remember the death of one who had been first a pupil and then a teacher in our own school, although at the time she died she was connected with another. She was to be buried shortly before the close of the afternoon session, and we who had been her associates asked permission to dismiss our classes for that last half hour—and our request was denied. If we died often, and so afforded grounds for the suspicion that we were scheming to obtain holidays for our survivors, that might not seem strange, but all the applicants for positions can testify that we are terribly long-lived.

ASSOCIATED ACTION.

Is it not possible that as an association we might give some help in cases of sickness? Of our apparent neglect after the end comes, our friends are happily unconscious, but before that we might be of some use. Could we not tax ourselves a certain per cent. of our salaries, so that the teacher who receives only $45 a month would not be expected to contribute an equal amount with those of larger incomes? This money could month by month, form a fund, being allowed to accumulate for perhaps, a year. After that time, a definite sum could each week be paid to any teacher who might be compelled by sickness to leave her class. It might not be enough to furnish many luxuries, but it would be a help, and it would show that her associates were neither forgetful nor heartless, although they might often be too busy to manifest their sympathy in any other than this material way.

And possibly if we thus made evident our desire to assist our comrades, the very fact might be a suggestion to those who preside over the pay-roll, reminding them that when a person receives a salary barely sufficient to supply the ordinary comforts of life, the entire withdrawal of that income at a time when many unusual expenses must necessarily be incurred means a state of mind that is not con-

ducive to a very rapid recovery. Half pay, under such circumstances would be a much appreciated improvement. When we act in behalf of our own companions we can better ask for a consideration of the matter by the Board of Education. A hundred teachers, well organized and acting in unison, themselves giving the aid that lies in their power, and then asking for their disabled comrade the reasonable assistance of the board, can speak with more force than can some one pale, little teacher, who hesitatingly asks if she must lose her entire salary for the time that she has been ill.

I am convinced that a large proportion of what we consider unattainable blessings would be cheerfully granted by the board if the members had the slightest indication of our desires, if the requests evidently voiced a general sentiment, and if they were presented in a reasonable instead of fretful way.

ENERGETIC PROTEST.

This brings me naturally to the "lastly" of my discourse—the duty of respectful, but energetic, protest. As a rule we do not protest in any definite way. We bewail our grievances among ourselves, and then we meekly and with outward smiles but inward dissatisfaction, do what we hate ourselves, and what half the time nobody particularly cares about our doing. We make cheap martyrs of ourselves—martyrs in an inglorious cause and for the accomplishment of no good results.

PUBLIC PROCESSIONS.

For instance, who of our number did not detest the idea of marching through the streets on Columbus Day? I do not presume to speak for the masculine portion of our rank and file. In the light of recent events and recent demonstrations, I am inclined to think that possibly men do enjoy participating in parades and processions; that uniforms and regalia, torches and brass bands, are dear to their hearts; but I am sure that I am not speaking too forcibly when I say that the average woman loathes anything of the kind. The few who of their own free will join in street processions are members of the Salvation Army, and I suppose they are buoyed up by the conviction that they are really accomplishing good results—a conviction that was certainly denied us. Of course we expressed, with considerable vigor, our views on the subject; of course we said that this was in no respect the kind of work we had been employed to do. As usual, we made all these remarks where they could not possibly do the slightest good,

and then, as usual, we went forth obediently. We saw our pupils, girl and boys, conducted through the middle of the streets at a pace that would have made ridiculous any attempt to call their astonishing progress "marching." Onward dashed the pupils, onward came the teachers, out of breath with their efforts to keep within shouting distance of their charges. And then—we waited. If we accomplished anything else it must have been when we were in a state of semi-unconsciousness from sunstroke, for somehow I cannot remember hearing much that could be called singing; and the solemn sound of the pledge of allegiance was chiefly conspicuous by its absence. I cannot imagine that we were a source of either pleasure or benefit to anyone else, and we ourselves were not in a state of perfect bliss by any means.

After the celebration was all over (and to most of us it was only a repetition of many another season of distress) I did venture to ask a member of the Board if he believed in this kind of thing. He did not look at all shocked by the question, answering most emphatically that he did not approve of it at all, but that it seemed to be expected of us. And there we were, engaged in a performance that was more than distasteful to us—a work entirely outside of our line of duty, because some outside committee, to whom teachers nor Board of Education were responsible, expected it of us, and we made no protest.

In preparation for the great event, one afternoon the children of the three Grammar Schools—more than a thousand children—were literally packed into an assembly hall, on the third story of a building with the most bewildering of stairways. The slightest earthquake shock—the fainting of some delicate child (and breathing was hard work) would have produced a panic resulting in the loss of dozens of lives. Do you suppose the teachers approved of taking a risk like that? But we did as we were told, because no one of us felt like being the first to object. We are models of obedience, but for responsible human beings obedience is not the only virtue.

USED TO ADVERTISE NEWSPAPERS.

Again, is it not about time to protest against being used—our consent being neither asked nor obtained—as advertisements for any enterprising newspaper that may wish to increase its subscription list? All over the State we have within the last year, been dragged before the public for the benefit of different papers. We have been voted for and bet on, and the question of our comparative popularity has been duly canvassed. If the managers of those papers had ventured even

to think of selecting the names of as many society leaders, and bringing them before the public in the same manner and for the same purpose, do you imagine that any action would have been taken unless the consent of those ladies had first been obtained? That consent would, very properly, have been asked as the greatest of favors, and the favor would not have been granted. Does anyone suppose that the position in which we were placed was a pleasant one? Why, then, did we endure the humiliation? Do you say that it would have been useless to object? I am sure that if there had been a general protest from the teachers of Sacramento when the idea of the popularity contest was first developed here, the sentiment thus expressed would have been respected and our protest would have received courteous consideration. I speak with the conviction of personal knowledge, for at least one such individual protest was so treated. In all probability no one desires to humiliate us, or to place us in uncomfortable positions, but we are so completely unresisting that we appear to lend ourselves naturally to all such schemes, although in reality they are as repugnant to us as they would be to any other class of people.

That contest is over, happily, but doubtless something else of the same nature will soon arise. Just now the pupils, instead of the teachers directly, are being used to increase the circulation of a San Francisco daily. The plan seems plausible enough, but I believe that the whole idea of using any portion of the school department as an advertising medium is wrong in principle and pernicious in results.

PLAIN VIEWS.

I fear that this paper contains no lofty sentiments. I have indulged in no glittering generalities. We all feel our responsibilities; we are anxious to do well whatever work falls to our share. We are interested in our pupils and are glad to put forth every effort for their advancement and welfare. But if at the same time we can give a helping hand to those of our number who must sometimes bow in submission when the heavy hand of sickness rests upon them, is not that at once a duty and a privilege?

And if we can convince the Board, the newspapers and the public at large that, while we give prompt and cheerful obedience to every command that has the right to come to us in that guise, it is our prerogative to object seriously if an order reaches us when an invitation should have been courteously extended, or a favor have been asked—then we shall have benefited ourselves, our associates, and our profession.

Watterson on Lincoln.

From Cæsar to Bismarck and Gladstone the world has had soldiers and statesmen who rose to eminence and power, step by step, through series of geometrical progression, as it were, each promotion following in regular order, the whole obedient to a well understood law of cause and effect. These are not what we call "men of destiny." They were men of time. They were men whose cause had a beginning, a middle and an end, rounding off a life with a history, full, it may be of interesting and exciting events, but comprehensible and comprehensive, simple, clear and complete. The inspired men are fewer. They rose from shadow and went in mist. They arrived, God's work upon their lips; they did their office, God's mantle about them; and they passed away, God's holy light between the world and them, leaving behind a memory half mortal and half myth.

Tried by this standard, and observed in a historic spirit, where shall we find an illustration more impressive than in Abraham Lincoln, whose life, career and death might be chanted by a Greek chorus as at once the prelude and epilogue of the most imperial theme of modern times.

Born as lowly as the son of God in a hovel, reared in penury, squalor, with no gleam of light nor fair surrounding, it was reserved for this strange being, late in life, without name or fame or preparation, to be snatched from obscurity, raised to a supreme command at a supreme moment and intrusted with the destiny of a nation. Where did Shakespeare get his genius? Where did Mozart get his music? Whose hand smote the lyre of the Scottish plowman and staid the life of the German priest? God alone, and as surely as these were raised up by God, inspired by God, was Abraham Lincoln, and a thousand years hence no story, no tragedy, no epic poem, will be filled with greater wonder than that which tells of his life and death. If Lincoln was not inspired by God then there is no such thing on earth as a special providence or the interposition of divine power in the affairs of men.—*Louisville Courier-Journal.*

An Eastern Even-Song.

Sleep, sleep ye lights that leave the sky,—
O yellow lights along the grass,
That woo the shadows, slanting by,
And turn to shadows as ye pass!
Sleep, sleep, ye lights of dying day!

The shadowed hills in slumber lie:
Within their tents the stars delay:
But we are waiting—Love and I.

Hush, hush, ye breezes spread for flight,
O winds on dusky wings upborne,
Nor wake the maples for delight,
Nor tune the thrushes for the morn!
Be still,—the sun has stepped adown
The sleepy margin of the night,—
O breezes blown mid shadows brown:
The stars—and we—are silent quite!

Charles Mills Gayley, in The Berkeleyan.

Cascade Brook.

O maiden silver sandaled, mountain-born,
Outstepping lightly from the cool ravine
Where, hidden from gaze profane, and all unseen
Save by thine own pure self, thou dost adorn
Thy amber tresses with pink columbine,
Soft-drooping over violets white and blue,
Wake-robins, and anemones for you,
Aurora-blown, sweet-scented with wild pine—
O maiden crowned with springtime, silver-voiced,
Step lightly on for aye, and on thy face
Be sunshine, since thy heart with ours rejoiced
When wandering through the woods with lazy pace,
We met thee, joyous brook, that pleasant day
To be remembered long, the ides of May.

L. D. Syle in Yale Lit. Magazine.

To Fallen Leaf Lake (Near Tahoe.)

Long since, near where Tallac now stands so bold,
Five thousand feet the snows lay hard and bright,
The great ice-plow in all its sullen might
Crunched mountains into dust, resistless rolled
Across the granite peaks and o'er the wold
Pushed three great ridges, two to left and right
And one before, while deep its beak of white
Bit into earth's black bosom dead and cold.
Then came a change. As when sometimes a heart's
Great sorrow, touched by God's hand melts in tears,
So melted all the snows before the darts
Of gentle heat. The frozen floods of years
Are loosed;—when lo! the three moraines a chalice make
To hold one jewelled drop,—Glen Alpine's Lake!

B. J. B., in The Berkeleyan.

METHODS AND AIDS.

Suggestions About the Study of the Vision of Sir Launfal.

EMILY C. CLARK, LOS ANGELES HIGH SCHOOL.

Few of the writings studied in our High Schools afford opportunity for more varied and valuable work than that offered by The Vision of Sir Launfal. The effort to get at the underlying thought of the poem develops the pupil in subtlety of mind, and increases his power of apprehending the ideal. The beauty of its diction and imagery cultivates his taste. Its moral lesson, plain yet not inartistically prominent, teaches him what noble living means.

At the outset, the class should be as well informed as possible about Lowell's life and personality,—the shaping influences of early training and social environment, and the character of his service to his country and the world of letters. In directing a class to the sources of such information it is best to avoid encyclopædic compilations of facts and dates, and to seek the living accounts of those who have the personal knowledge of friends or the critical discernment of scholars. Bits of the personal history of an author, and significant anecdotes about his habits, his friendships and his domestic life are always desirable, and so interesting that they are almost sure to be remembered. As far as possible all new biographical information should be related to that already acquired. For instance, the educational advantages of Lowell should be compared with Longfellow's, and the points where their lives touched should be observed. By the time a student has advanced to the study of Lowell, he should have a distinct notion of the earnest thinking and the high moral standards of the period which produced our famous New England poets.

The study of The Vision of Sir Launfal gives an opportunity for making an acquaintance with the traditions of the Holy Grail and the Arthurian legends. This would be advantageous if time allowed; still only a little information regarding the legend is necessary for the comprehension of the poem.

In preparation for each carefully studied work, other writings of the author and whatever else of direct bearing upon it is at hand,

should be assigned to the class as supplementary reading. Thus a basis of comparison, and a clearer idea of the writer's prevailing tone, will be acquired. There is not much of Lowell's prose that young students will be interested in, but they might read the chapter on Wordsworth in Among my Books. Let them read as much of his poetry as possible, certainly Under the Willows and Under the Old Elm, parts of The Biglow Papers and such shorter poems as The Fatherland and The Changeling. If they will read Tennyson's The Holy Grail, so much the better.

With a poem like this, where the thorough comprehension of the thought is so fruitful and so imperative, it is well to take the time of several recitations simply for a careful reading. Unless pupils read and think very carefully, it helps them to have questions about the more obscure lines posted before the recitation.

The class should be prepared to read aloud any passage in the lesson assigned, in a manner to interpret its meaning, and to attempt, at least, the explanation of any line. It is good training for pupils to try to state the poet's thought in their own words. It tests their comprehension of the poem, and trains their power of expression. Of course it is irritating to an appreciative teacher or student to see the perfect beauty of the poet's language marred in feeble and awkward efforts to reproduce his thought. Yet, perhaps one is only the more deeply impressed by the excellence of the original when one turns to it from the weak imitation.

There are some lines in this poem which the boys and girls are apt to find difficulty in fathoming. They are likely to miss the full force of

> "Daily, with souls that cringe and plot,
> We Sinais climb and know it not."

They will need to consider, also, the relation of the opening stanza to the rest of the poem, and the meaning of the preludes. The Vision of Sir Launfal requires for its appreciation not so much understanding as the power of sympathetic seeing and feeling. The description of June should recall the sensations of a perfect spring day in California. Likewise the thought of the snow and the chill wind of the second prelude may almost give a shiver.

Just as much of this poem should be memorized as time will permit. If the practice of memorizing is begun early and faithfully continued, it must result in easy and accurate recalling of noble lines. It

is a valuable memory training and an aid in moral and æsthetic development,—indeed it is of incalculable benefit.

In the very beginning of English work pupils should be trained to take a scholarly pleasure in comparing what they are reading with that which is already familiar.

If they have read or listened to the Intimations of Immortality, the ninth and tenth lines of Sir Launfal,

> "Not only around our infancy
> Doth heaven with all its splendors lie;"

should recall Wordsworth's

> "Heaven lies about us in our infancy."

The prelude to Part II. should bring to mind the ice palace in The Little People of the Snow.

The love of Nature, particularly of plant and bird life is dominant in this poem. Lowell was not a pale student, gleaning from books alone, but he knew how to "mix his blood with sunshine, and to take the wind into his pulses." Let the pupils search for allusions to outdoor life throughout Lowell's poems, and they will soon have abundant proof of this.

The central effort of this poem should be to lead the class to conceive the truth which finds its fullest expression in lines 315 to 317, and earlier in lines 160 to 174 and 280 to 287. The thought of l. 168:

> "That thread of the all-sustaining Beauty
> Which runs through all and doth all unite,"

is suggested in

> "Every clod feels a stir of might."

(l. 37), the idea of the universality of sentient life, the bond that unites human and brute creation alike. And here is a thought which may be brought out again with the Ancient Mariner. The conception of the unity of all life, and the idea of the joyous and spontaneous giving which results when love of self is lost in the many, are essential to the comprehension of the poem. But it is very rich in ethical suggestion, and much more can be gleaned by an exhaustive study.

When the thought has been grasped the form may receive consideration. The class should study the versification a little, observing the rhymes and the prevailing rhythm and meter. The Vision of Sir Launfal may be compared with other poems in tetrameter which have been read, and contrasted with Evangeline or something else of quite different meter. Variations of rhythm should of course be noted.

This poem would repay a thorough figure study. The source of Lowell's images is, for the most part, external nature, and usually inland rather than ocean scenes. Metaphors are found in abundance, and they will probably remind the pupils of the condensed and forceful images of Whittier rather than the longer and more carefully wrought figures of Longfellow.

The class must understand the allusion in "For a cap and bells our lives we pay," line 27, and observe the exquisite beauty of lines 90 to 94:

> "The soul partakes of the season's youth,
> And the sulphurous rifts of passion and woe
> Lie deep 'neath a silence pure and smooth,
> Like burnt-out craters healed with snow."

The simile

> "And midway its leap his heart stood still
> Like a frozen waterfall"

is vivid, and should occasion comment.

See that the class can clearly explain the piers of ruddy light built out against the drift of the cold. Sometimes it is advisable to have all the figures of a piece classified as to their kind, sometimes as to their source, and occasionally it is sufficient to simply select the most pleasing ones, if possible giving some reason for the delight afforded.

The memorable lines of such a poem as this should surely be noted. And encourage individual judgment as to what s memorable.

Last comes the study of the diction. Some of the words used in this poem may be termed rare, and will give some slight idea of the change that the language has undergone since the Elizabethian period. Thus there will be some assistance for their word work in Shakespere. The expression "of high degree" should present to their minds some notion of the days of chivalry. They should learn the derivation of "churlish;" for there is history in the word, as in "yule-log" and "blazoned." "Lightsome" may be new, and "corbel" also. Let the class think of some reason for the use of "'gan" and "'neath," line 152, and "gloom" as a verb, line 144. The word "wold" should recall its occurrence in Evangeline and in Scott, if not elsewhere. If the pupils get a distinct knowledge of the meaning of "fretwork" and "arabesque" from the prelude to Part II., their work in the Alhambra will be aided. Let them realize the force of such words as "grewsome," "rain-blanched," and "shaggy" by trying to find substitutes for them. Let them find some other example than "leprosie" for the use of *ie* in-

stead of *y*. All the words may be classified according to their Latin or Anglo-Saxon origin, if it seems worth while. In fact, interesting and profitable word-study of this poem is limited only by time, and not in the least by the material.

Related Work in the Primary.

By AGNES STOWELL.

Years ago (?), by many teachers, each subject in the course of study was treated as a thing quite separate and apart from any other subject that may have gone before or that might follow it. When entomology was taught it was entomology and it was nothing more than entomology. When a reading lesson was given, it too was a separate thing. Language was another. Drawing was away off from science or reading. As for number work! That dealt only with the hypothetical John and James who *used* their spare time in winning each other's marbles, or men walking in different directions, and the like. Writing was the time when the youngsters laboriously followed the copy and wrote page after page of interesting words like *mute*, *cosmos*, and *zephyr*. *Poetry in the school course!!* Why that was a thing quite out of connection with ordinary school work!! The only time that could cut any figure was in recitation for company on "Exhibition Day."

We grant that all that is changed. But is it enough changed for truly educational work?

A teacher once wrote to an educational journal, "Please tell me how to teach *shoe-pegs*."

SHOE-PEGS was to be a new subject in her curriculum divorced from number work, to whom Providence had designed it was to be a faithful though humble helpmate. Truly unnatural and illogical *that* separation.

But is not the disunion between science, language, drawing, reading and modeling, equally unnatural and illogical?

Think of the amount of energy wasted by the teacher in trying to make interesting and profitable to the child a day's work like the following:

SCIENCE OR OBSERVATION LESSON.—The Duck.

MODELING LESSON.—The Sphere.

DRAWING.—Copy from blackboard picture of a cat.

LANGUAGE.—"Telling sentences" containing the words—*hen*, *rat*, *crab*, *fox* and *my*.

POEM TO MEMORIZE.—"Camel, thou art good and mild," etc.

READING.—"Drive the cow in the lot. Drive her in and shut the gate," etc., etc.

It would need a genius to make life glow in each of those lessons. And even if a genius did, much of the genius's force would be wasted in so doing.

But let us change that day's disconnected work to related science work.

SCIENCE LESSON.—A duck is brought to school. Children make their observations and reply to questions asked them by the teacher.

WRITTEN LANGUAGE.—Teacher writes on the board and pupils copy statements made during the science lesson.

READING.—The reading of the papers written by themselves and of additional matter given by the teacher relating to the duck.

POETRY.—Parts of Bryant's "Lines to a Water-fowl" or Heney's "A Wild Duck."

DRAWING AND MODELING.—The duck's foot and bill.

This is economy of force.

And more, for the enthusiasm generated by the contact with Nature carries our young student over the mountains of difficulty which natural timidity or apathy has created for him.

It goes without sayiug that the children, in order to talk, must have *something* to talk about. That *something* must be interesting and *worthy of the child's study*.

Now, where better can that *something* be found than in the world of Nature? If it be the beautiful poppy whose orange colored blossoms gladden the eye, the bee, whose industry has pointed so many a moral lesson, or the pussy cat—it matters not. Let the object be of such a nature that it can either be brought to the school for study or the observations can be made from day to day as the lessons progress.

Children should be encouraged to express themselves *freely*. The form of their expressions is quite a secondary consideration.—*Ex.*

Ventilation of School Rooms.

C. W. MOORES, SAN FRANCISCO, CAL.,

The impure air of a room is generally that near the floor. The expired air contains carbonic acid gas, which is fifty per cent. heavier

than ordinary air, and is one of the most deleterious substances that can be inhaled. It settles near the floor, and though windows or ventilators may be opened near the ceiling, this impure air will not escape, but remains to poison the atmosphere of the room, causing headache, languor, etc., and day by day will rob the most robust of health, and ultimately of life.

The worst possible method of ventilation is to open windows at the top. The warm, pure air passes out, leaving the cold, foul air with its disease breeding germs to settle down among the occupants of the room.

Heated air is not necessarily impure air. It rises to the ceiling, and if not allowed to escape is reflected down and will keep the temperature warm and uniform. If windows are opened at the top warm air escapes, cold air rushes in, and no amount of heat or fire in our part of the room will keep the entire room warm on a cold day, but a draught will be caused on the head by the passing out of warm air and the rushing in of cold air.

In the absence of ventilators near the floor, windows should be raised on that side of a room least exposed to winds. The only change that then occurs is the passing out of impure air and the incoming of fresh air. The change is so gradual that no draught is caused.

A good way to ventilate a room is to take a board about six inches wide, and a few inches longer than the window is wide; let the edge rest on the window-sill, nail the ends to the casing, and by raising the window three or four inches, you will have as good ventilation as can be effected, without the least particle draught.

Windows should never be opened at the top except to cool the room.

Laboratory Physics. II.

LILLIE J. MARTIN.

EXERCISE XVII.—LATENT HEAT OF VAPORIZATION.

1. Bunsen flame. Tripod and wire gauze. Flask and delivery tube. Graduate jar. Calorimeter covered with asbestos jacket. Thermometer. Cloth to cover delivery tube.

2. (*a*) Weight of water in the calorimeter before passing steam in=.4 k

(b) Weight of water in the calorimeter after passing steam in=
(c) Weight of steam condensed=
(d) Temperature of water in calorimeter before passing steam in=
(e) Temperature of water in calorimeter after passing steam in=
(f) Increase of temperature due to passing the steam in=

Put .4k of water into the calorimeter and place the thermometer in the vessel. Fill the flask two-thirds full of water and heat it. After the steam has escaped freely from the delivery tube, for three or four minutes, note the temperature of the water in the calorimeter and as quickly as possible plunge the delivery tube nearly to the bottom of it. While the steam is condensing, stir quickly with the thermometer, noting the temperature from time to time. When the temperature of water in calorimeter is about 8° or 10° above that of the room, withdraw the delivery tube as quickly as possible and note temperature of water in the calorimeter.

(g) To find calories of heat given to water in the calorimeter multiply the increase in temperature (f) by weight of water in the calorimeter (a).

(h) To find heat given to the water by the steam's condensing and cooling from 100°c to temperature of mixture, multiply 100 minus the answer of (e) expressed in calories, by the weight of the steam condensed.

(i) Subtract (h) from (g) to find calories of heat obtained from steam, condensed to water at 100°.

(j) Latent heat of steam will equal calories in (i) divided by weight of condensed steam (c).

Point out sources of error in this experiment.

EXERCISE XVIII.—SPECIFIC HEAT.

1. Calorimeter covered with asbestos jacket. Tin boiler. Bunsen flame, Tripod. Thread. Roll of sheet lead. Thermometer. Weights. Graduate jar.

2. (a) Weight of roll of lead=.3k.
(b) Weight of water of temperature of air in room=
(c) Temperature of water of temperature of air in room=
(d) Temperature of lead before immersion in calorimeter=
(e) Temperature of water after the roll is in it=
(f) Increase of temperature of water in calorimeter=
(g) Fall in temperature of lead (d-e)=

Weigh the coil of lead and suspend it from a stick by a thread in boiling water, for a sufficient time to acquire the temperature of the water. Observe the temperature of the boiling water In no case allow the lead to touch bottom of dish. Place the calorimeter as far away from the flame as possible, and let it stand on some poor heat-conducting material. Now pour into the calorimeter a known weight of water of the temperature of air in the room, and of sufficient amount to cover the roll entirely, when placed in it. Record the temperature of the water. Now transfer to it, the heated roll of lead; stir the water thoroughly with the thermometer and record the reading, when the mercury ceases to rise.

(h) Multiply the weight of water used by its increase in temperature to obtain the number of calories of heat, imparted by this roll to the water.

(i) To determine the specific heat of lead, divide (h) by the product of the weight of the lead and its fall in temperature.

What is the meaning of your answer?

Is the specific heat obtained for lead the same as in text book? Explain.

Give reasons for precautions taken in experiment.

EXERCISE XIX.

Draw diagram and explain the action of the steam engine in the laboratory.

ELECTRICITY.

EXERCISE XX.—LINES OF MAGNETIC FORCE.

1. Two bar magnets. A small compass with needle.
2. Describe construction and action of a compass.

Lay one of the magnets on a page of your note book, the N seeking pole pointing N. Draw its outline on the page. Place the compass at the extreme north-east end of the magnet, and move it away in the exact direction in which the compass needle points. Continue this movement, changing position of compass needle, until the path reaches the edge of the paper or returns to the magnet. Trace upon the paper the line thus followed, putting arrow heads to indicate the direction in which the N pole of the compass needle points. Place the compass on north-east side, a little below first position, proceed as before. Indicate where the force is strong and where it is weak, by using a heavy line to connect the arrows where the force is strong, and a light line where the force is weak. Repeat nearer

middle and at middle of east side. Trace an equal number of lines on west side.

The pupils should study the diagrams and try to explain the characteristic features in accordance with what he has learned about magnets and the earth's action upon them.

EXERCISE XXI.—SINGLE FLUID GALVANIC CELL.

1. Tumbler. Sulphuric acid. Strip of zinc and strip of copper each attached to a piece of wood, and each having a copper wire soldered to one end. Mercury. Connectors.

2. Fill tumbler ⅔ full of water and pour in 1-20 of its volume of sulphuric acid. Put the zinc in the acidulated water. Effect?

Remove zinc and put copper in acidulated water. Effect?

Put both the zinc and the copper into the acidulated water parallel to each other but not touching. Note what occurs at the surface of each strip and record. Now touch the outer ends of the two strips and note effect. Join copper wires by means of a connector. Effect?

Join the two wires by cotton string. Effect?

Connect the cell with the galvanometer. Note the behavior of the needle, and record the position in which it comes to rest, tapping the instrument lightly to make sure the needle has not through friction come to rest in a wrong position. Disconnect the zinc strip and amalgamate it by cleaning it thoroughly with dilute sulphuric acid and while wet pouring mercury over it. Replace it in the acid, and before connecting it with galvanometer, note behavior of its surface. Then connect it as before, and note what occurs at the surface of the two strips and what position the needle takes, being careful to have the two strips as far apart and immersed to the same depth as before. Leave the circuit closed through galvanometer ten minutes or even three quarters of an hour, occasionally recording the position of the needle. At the end of this time, if there are visible bubbles on the strip of copper rub them off without removing the strip from the acid and note the position of the needle. Finally remove the copper strip from the acid, rub it thoroughly, then put it back into the acid, and note the deflection of the needle.

Try effect of amalgamating the copper as well as zinc. First clean the copper with more acid and then rub with mercury. Mercury can afterwards be removed from copper by heating in flame or rubbing with sand paper.

EXERCISE XXII—SECONDARY, OR STORAGE BATTERY.

1. Two strips of sheet lead with a wire soldered to each strip. Tumbler of dilute sulphuric acid. Dynamo. Galvanometer. Small electric motor.

2. Dip the plates into dilute sulphuric acid and connect with poles of dynamo. After a few minutes disconnect the plates and join the galvanometer or small motor. Conclusion?

EXERCISE XXIII.—TWO FLUID GALVANIC CELL.

1. Daniell's cell. Galvanometer. Wire. Connectors.

Time.	Position of N. Pole of Needle.	Wt. of Zinc.	Wt. of Copper.
On closing circuit.	.....	.....	.....
End 10 min.	.....	.....	.....
End 20 min.	.....	.....	.....
End 30 min.	.....	.....	.....
End 2 hrs.	.....	.....	.....

Describe Daniell's cell. Pour into the porous cup dilute sulphuric acid, (20 parts of water to 1 of sulphuric acid), until the cup is full to the level of 2 cm. below its top; now put the amalgamated zinc into the porous cup. Put the cup containing the acid and zinc into the glass jar containing the cylinder of copper, and pour into it a saturated solution of sulphate of copper, until the fluid stands as high in the jar as the acid stands in the porous cup.

(a) Put the Daniell's cell in circuit with the galvanometer, and record the deflection of needle. Repeat with single fluid galvanic cell. Does the single or two fluid galvanic cell give the stronger current?

(b) Remove the zinc and copper strips from Daniell's cell. Wash and dry carefully. Weigh each and return to liquids. Connect with galvanometer, and record the position of the needle every ten minutes for half an hour and at the end of two hours. Then remove strips and again weigh. How do weights compare? Explain. Should you think it would be better to use the single or two fluid galvanic cell for continuous work?

EXERCISE XXIV.—ACTION OF CURRENTS ON MAGNETS—GALVANOMETER.

1. Daniell's cell. Galvanometer. Wires. Connectors. Paper doll.

2. Place the compass of the galvanometer near the cell; let the needle come to rest; close the circuit; (1) hold the wire with your hands over the needle so that the current flows from north to south, and note the swing of the north-seeking pole of the needle. (2) Repeat as in (1) but with current under the needle. Effect? (3) Repeat (1) with current reversed, —that is, flowing from south to north over the needle. Effect? (4) Repeat (2) with current flowing from south to north under needle. Effect? (5) Place compass on a support, hold wire vertically, exactly north from compass with current flowing down, and bring it up to the north pole. Effect? (6) Repeat (5) at south pole of magnet. Effect? (7) Invert wire so that current flows up, and repeat (5). Effect? (8) Repeat (7) at south pole of compass. Effect?

In the above experiments what conditions affect the direction of swing of needle? If we imagine ourselves to be swinging in the current, with the current, and facing the needle, towards which hand do we observe in each of the experiments above, that the north end of the needle is deflected?

(9) Make a loop of wire, place compass in center and close circuit. Effect? (10) Repeat (9) with a large loop. Effect? (11) Repeat (9) by winding several loops of same size around wire. Effect? What conditions affect the amount of swing? Describe the construction of the galvanometer, and show how it may be used for determining the presence of an electric current, its direction, and its relative strength.

Illustrate (1)—(8) by a diagram for each case. The needle always tends to place itself in the line of magnetic force, from a study of the above diagrams, make a diagram of the field of force around a wire carrying a current.

EXERCISE XXV.—VOLTAMETER. G. p. 198.

EXERCISE XXVI.—ELECTRICAL RESISTANCE OF WIRES.

1. Daniell's cells. Galvanometer. Rheostat. 1 spool, 95 ft., No. 30 insulated copper wire; 1 spool, 96 ft., No. 23 insulated copper wire; 1 spool, 48 ft., No. 30 insulated copper wire; 1 spool, 48 ft., No. 30 insulated copper wire; 1 spool, 48 ft., No. 30 insulated German silver wire.

2.

Trial - - - -	No. of wire - - -	Diameter of wire	Length of wire -	Kind of wire - -	Deflection of N. pole of needle -	Ohms resistance. by experiment.	Ohms resistance. by calculation.
1	.....	.....	.....	.....	.....	.....	.....
2	No. 30.	.....	.....	.....	.....	.....	.....
3	No. 30.	.....	.....	.....	.....	.....	.....
4	No. 23.	.....	.....	.....	.....	.....	.....
5	No. 30.	.....	.....	.....	.....	.....	.....



(1) Place the cell in circuit with galvanometer. Note and record position of needle. (2) From circuit as per diagram by placing spool containing 96 ft. No. 30 copper at S, the galvanometer at G and cell at B. Let the needle come to rest, close the circuit, and note deflection of the needle in degree. Conclusion? (3) Take this spool out of circuit, and substitute spool of 48 No. 30 copper. Account for difference of deflection of needle. (4) Substitute spool of 96 ft. No. 23 copper. Account for difference of deflection as compared with first spool. (5) Substitute spool of 48 ft. No. 30 G. S. wire. Compare the resistance offered to the current by this wire with spool of 48 ft. No. 30 copper.

(6) Measure the resistance of 96 ft. No. 30 copper wire. Repeat (2), and note deflection of needle. Substitute rheostat for the spool. Move the switches, throwing in or taking out resistance until the deflection becomes the same as the deflection when spool was in circuit. The sum of resistances as indicated by the three switches must be equal to that of wire on spool. Calculate the resistance of same wire and compare results obtained by experiment and calculation.

(7) The electrical current which is able to free from its chemical combinations .000329 grain of copper, or .000339 grain of zinc in one second is called an ampère. Calculate the electro-motive force of a Daniell's cell by using results obtained in Exercise XXIII for the current strength, the results of (6) for the external resistance, and regarding one ohm as the internal resistance.

Exercise XXVII.—Battery Resistance—Combination of Batteries.

1. Two Daniell's cells. Single fluid galvanic cell. Galvanometer. Wires. Connectors.

2.

Trial.	No. of cells.	How connected.	External resistance.	Galvanometer reading.	Distance apart.	Distance in solution.
(1)	1	.....	None.	.....	¾ in.	½ in.
.....	.....	.....	None.	.....	¾ in.	2 in.
.....	.....	.....	2m G. S. wire No. 30.	.....	¾ in.	½ in.
.....	.....	.....	2m G. S. wire No. 30.	.....	¾ in.	2 in.
(2)	.....	.....	None.	.....	1½ in.	2 in.
.....	.....	.....	None.	.....	¾	2
.....	.....	.....	2m G. S. wire No. 3.	.....	1½	2
.....	.....	.....	2m G. S. wire No. 30.	.....	¾	2
(3)	.....	Abreast.	2m G. S. wire No. 30.	.....	.....	.....
.....	.....	Series.	2m G. S. wire No. 30.	.....	.....	.....
(4)	.....	Abreast.	None.	.....	.....	.....
.....	.....	Series.	None.	.....	.....	.....
(5)	.....	Opposed to each other.	None.	.....	.....	.....

(1) Connect the single-fluid galvanic cell in circuit with the galvanometer. Place the plates ¾ in. apart, and let them dip ½ in. in solution. Note deflection of galvanometer. Move the elements down into the acid until 2 in. are in solution. Note deflection. Does the size of the plates affect the strength of the current? Prove your answer from results obtained. Introduce two meters of U. S. wire No. 30 into circuit, and repeat. How does the size of plates now affect strength of current? Under what circumstances is it better to use large plates?

(2) Note deflection when plates are 1½ in. and ¾ in. apart, and state whether distance between plates affects strength of current? Introduce two meters of G. S. wire No. 30 and repeat. When external resistance is added, what is the effect on strength of current of lessening the internal resistance?

(3) Join the two Daniell's cells abreast; that is, join the wires leading from the copper plates together, and also those leading from the zincs of the two cells. Insert the two cells thus arranged in the circuit as a single cell and, retaining the two meters of G. S. wire No. 30, note deflection obtained. Then join the cells in series; that is, the copper of one cell to the zinc of the other cell, by means of their wires, and connect the other two wires in the circuit as the wires from a single cell would be connected. Other things being unchanged, note the deflection of the needle. When the external resistance is great, is it better to join cells abreast or in series?

(4) Remove the two meters of G. S. wire No. 30 and repeat (3). When the external resistance is small, is it better to join cells abreast or in series?

(5) Join together the copper terminals. Then connect zinc terminals with galvanometer. Effect? What does the experiment indicate as to the comparative electro-motive force of two cells? Discuss the equation $C=\frac{E}{R+r}$, taking the values of C, E, and r from Exercise XXIII, and calling the resistance of 2 meters of G. S. wire No. 30, eight ohms, and show that one can predict the results of experiments (1), (2), (3), (4) from the study of this equation.

Experiment XXVIII.

Select an electrical machine for special study in the laboratory, and afterwards visit the electrical works or some other place to see the machine in actual use.

Experiments 18–22.—G'. p. 196; p. 226; p. 230; p. 237–255. Work one experiment, p. 234.

SOUND.

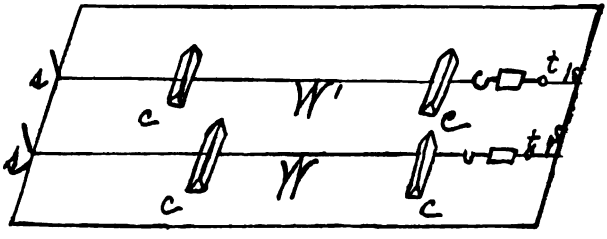
Exercise XXIX.—Velocity of Sound.

1. Pendulum, beating seconds. Hammer. Measuring string.

2. One pupil strikes the board just when the pendulum bob passes middle pt. of its arc. The other places herself at such a distance that the stroke made when the pendulum bob passes through the middle point of its arc in one direction, reaches her ear just when the bob passes through the middle point of its arc in the other direction. Measure the distance, and it will be approximately the distance traveled by sound in a second. In case of wind, let the experimenters change places and repeat the experiment. Take the mean of two distances to obtain the distance traveled by sound in still air.

Exercise XXX.—Pitch of Vibrating Strings.

1. Two spring balances (B). Two pieces of spring brass wire, (WW'), 1½ in. long, No. 24 (.02) and No. 27 (.01 in.) 4 triangular pieces of wood (*c*), screws (*s*), two pieces of string (*t*), two tuning forks (CC,), meter stick.



Note.	Rate of vibration.	Length W.	Tension W.	Size W.

Stretch wire W. with a force of 20 lbs. Set string vibrating by plucking at middle. Holding ear near wire, find and record what length of it will give notes in unison with each fork. What is the relation between length and pitch of string. Change the tension of the wire when vibrating C until it vibrates C_1. What is the relation between tension and pitch of string? Take wire W′ and arrange length same as in W when it vibrates C_1 with a tension of 20 lbs. What note does W′ vibrate? What is the relation between weight of strings and pitch of vibration?

EXERCISE XXXI.—WAVE LENGTH OF SOUND—VIBRATING RATE OF TUNING FORK.

1. Tuning fork. Cylindrical jar. Water. Measuring stick.

2. Hold a vibrating tuning fork over the jar, and pour in water until a point is reached where the sound is loudest. Measure and record the length of the air column giving loudest sound. Repeat three times. Calculate the wave length of the sound, and the number of vibrations of the fork. For method, see Gage, p. 293.

EXERCISE XXXII.

As in XXVIII but in Sound.

LIGHT.

EXERCISE XXXIII.

Photometry G., p. 333.

EXERCISE XXXIV.—IMAGES IN A PLANE MIRROR.

1. A plane mirror supported, with its plane vertical. Sheet of paper. Protractor. Pins. Measuring stick.

2. Draw a straight line through the middle of a sheet of paper. Place the mirror over the middle of this line with its plane vertical, and its horizontal edges parallel to the line. Stick a pin upright into any part of the paper, from which the reflecting surface can be seen. Then place the eye in some position from which the reflected image of the pin, and draw another line on the paper, directly toward that point of the table from which the reflection of the pin appears to rise. Without disturbing the pin or the mirror, place the eye in some different

position and draw a line as before. Then draw a line from the actual pin at right angles to the line on which the mirror rests, and continue it until it crosses the other two lines. Repeat everything with the pin in one other position. Study these results with the purpose of finding how to foretell where the image of the pin placed in any position in front of the mirror will appear to be, the eye of the observer being placed in any position from which the image can be seen.

EXERCISE XXXV.—FOCAL LENGTH OF CONVERGING LENSES.

1. Mounted lense. Meter stick. Paste-board screen.

2. Place the screen at one end of a meter stick and the lens at another. Look at the back of screen. Slide the lens along on the stick until the position is found when the image of the sun on the screen is brightest. Then measure the distance from the center of the lens to the screen. Repeat and record the measurements three times. Find the mean of results. If the two surfaces of the lens are differently curved, repeat test with lens reversed.

EXERCISE XXXVI.—CONJUGATE FOCI OF CONVERGING LENSES.

1. Convex lens. Screen. Candle. Small card with pin hole. Meter stick.

Trial.	Distance.	D o	D i	Focal Length (F).
1	.....	.....	.....	$\frac{1}{F} = \frac{1}{D^o} + \frac{1}{D'}$
2	.....	.....	.....	"
3	.....	.....	.....	"
4	.....	.....	.....	"

Place the candle at one end of a meter stick. In front of this place a card having a pin hole in it. At the opposite end of stick place the pasteboard screen. Set the lens on the meter rod near the card, and then slide it away until a distinct image of the illuminated spot on the card appears on the screen. Record the distances from the lens to the object. (D_o) and to the image (D_i). Repeat with card and screen 80, 60 and 40 cm. apart. Calculate the focal length of lens. How does the result obtained compare with the focal length obtained in exercise XXXV?

EXERCISE XXXVII.—IMAGES FORMED BY CONVERGING LENSES.

Position of object.	Position of image.	Erect or inverted image.	Real or virtual image.
1. More than twice focal distance.			
2. Twice focal distance.			
3. Less than twice, and less than once, focal distance.			
4. Focal distance.			
5. Less than focal distance.			
6. Repeat 1, exchanging the object or image.			

Arrange apparatus as in Exercise XXXVI, placing the card (object) in position indicated above and moving screen (image) until a distinct image is obtained in each case.

With the object in the above positions, determine the positions, etc., of the images obtained by construction. See G. Compare the results obtained by experiment with those obtained by construction.

EXPERIMENT 23. G. p. 365; 1, 2, 3. 366; 1, 2, 3.

EXERCISE XXXVIII.

As in XXVIII, but in Light.

Complimentary.

SAN FRANCISCO, Feb. 10, 1893.

MY DEAR FISHER:

Allow me to congratulate you on last month's JOURNAL. The papers by Monroe and Barnes are both valuable documents and will be of great assistance to all teachers who are earnestly studying educational questions. Yours,

JAS. G. KENNEDY.

Another correspondent writes: On the subject of Examinations and Promotions, Principal Pierce, of the Chico Normal School has said the "final word." Nothing more remains. He has summed up the opinions collected, and given us, what is better still, a plan which he pursues that contains the best his correspondents suggest and seems to us a solution of the whole matter.

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

City School Supervision.

At the February meeting of the Department of Superintendence of the National Educational Association Mr. William H. Maxwell, superintendent of schools at Brooklyn, took up the topic, "The Supervision of City Schools." The following is an abstract of his remarks:

The principal should not only advance bright pupils more rapidly than dull ones, but should seek to discover special aptitudes and guide their possessor in the direction in which they may be made most useful. The principal should seek to determine by inspection and examinations, used as elements of teaching—not stated examinations— whether each teacher in his school is doing her whole duty. The principal should seek to coördinate all the studies of a grade and to unify the work of each teacher with that of the teacher above her and the teacher below her.

The principals should correct faults of teaching, and endeavor to improve the work throughout his school by private criticism, by giving model lessons, by general meetings of teachers in which sound pedagogical literature shall be systematically studied, and by grade meetings in which the work of each grade shall be regularly mapped out.

The principal should carry out all rules and orders; he should try experiments and report the results to the superintendent; he should report to the superintendent all new ideas or devices, so that the latter may convey them to other schools; and he should report at stated intervals, faithfully, honestly, and without fear or favor, on the efficiency of every teacher under his charge.

The duties of the superintendent naturally fall into five divisions: Duties in the matter of certificating teachers and preparing an eligible list from which appointments may be made. Duties as an officer of what may be called administrative appeal. Duties in the way of improving the efficiency of teaching, and of guiding and directing the work of teaching. Duties toward the board of education. Duties toward the press and the public.

The conditions necessary to make any system of school supervision effective is that responsibility shall be definitely placed. The teacher should be responsible for the work of her class, the principal for the work of his school and the superintendent for the work of the whole. To carry out this plan under an ideal system the principal should nominate his subordinate teachers, the superintendent should nominate the principals, and the superintendent should be made secure in his tenure of office

STATE UNIVERSITY AND NORMAL SCHOOLS.

Charter Day at the State University.

INSTALLATION OF PRESIDENT KELLOGG.



COLLEGE OF CALIFORNIA, 1867.

On the 23d of March, the State University closed its first quarter of a century and welcomed a new President. Its friends have reason to feel gratified at the work of the past and to cherish high hope for the future. At no period in its history has the public taken so warm and so friendly an interest, nor the alumni and alumnæ offered it such loyal, united and effective support.

No truer touch-stone of the high appreciation in which the University is held, no stronger evidence of the devotion of its graduates is needed than the files of the Legislature of '93, which show that every bill introduced to strengthen its grasp and extend its influence went to the Governor without a struggle and as quickly as the routine of legislative machinery would permit.

Hon. John R. Glascock spoke for the Alumni:

To those who, impelled by an ardor that no obstacles can daunt, are unwilling to stop half way, there are opened the portals of the University. To such the State owes all they crave, all it can give, to form of them the guiding forces of the loom on which the fabric of society is fashioned. A great State University can spring only from the wants and aspirations of a free, enlightened and progressive people. No stunted brain should plan its splendid proportions, no niggard hand supply its needs. It should be a world in itself, embracing and harmonizing the widest divergent lines of culture, from the purely practical to the purely abstract. Without such qualities no University can be truly great. With them it becomes the palladium of a people's liberties, the conservator of public morals, the standard of public ethics, the reservoir in which are stored the working forces of the social compact.

W. W. Deamer on behalf of the affiliated colleges of San Francisco, closed his address with the following:

The San Francisco members of the University join with the Berkeley members to-day in voicing a respectful salutation. You were already at home here and devoting yourself to the service of the State before any of us, and it is now our duty as alumni to offer you a cordial welcome as president inaugurate. You may count, sir, upon our loyalty as by your own example you have taught us serene patriotism. And finally, I may express the hope that you, having endured the hardships of the pioneer, may long remain with us in everlasting honor.

Professor Joseph Le Conte on the subject, "What Ought to be the Outline of Education in California," said:

There are characteristics of such an education. It must be thoroughly human, distinctively modern, distinctively American and Californian and must be for each pupil distinctively individual. It must be human, for it must elevate and strengthen our whole humanity; it must raise the plane of our activity, of our whole nature, physical, mental and moral, particularly the mental and moral. It must develop a noble manhood and womanhood. It must be distinctively modern —no activity can be thoroughly effective unless it is in sympathy with the age, thoroughly in keeping with the scientific spirit of the age. The tendency of modern times is to extreme differentiation of intellectual pursuits. Only a small part can be cultivated, and the University must meet this necessity and prepare to meet the requisities in each field. The outline of education in California should be distinctively American and Californian; not that we must be unlike others, for we have much to learn from others, but we must conserve our own character. All that we get from Europe which broadens our minds is good, that which restricts we should shun. For each pupil the outline of education should be distinctively individual. We know well that the tendency of refined society is to efface individuality, and so far as it is a check on vulgarity and rudeness it is good, but we do not wish to foster monotony, or to stunt individual energy and abilities.

President David S. Jordan, of Stanford:

I am glad to bring greetings from Palo Alto here. I am glad to greet President Kellogg who has ever been a friend to my college and to myself. Every deed done to the University is one done to the whole State. I am a firm believer in State Universities and I believe that there is a great work to be done by them. Though loyal to my charge I believe that the generosity of one man or many men cannot relieve the government from its duty to the State University. The republic of learning knows no boundaries of college walls. Every good man who comes into California raises California's standard of living. "A dollar in a University is worth more" Emerson reminds us, "than a dollar in a jail." The friendly rivalry as to which of her two Universities can give the most value for each dollar it spends is a strife in which California can rejoice. For every dollar spent on the higher civilization raises the price of every foot of land which its influence reaches. When Emerson and Hawthorne and Thoreau lived in Concord this fact was felt in the price of every city lot in Concord, for men from other towns were willing to pay money for the privilege of being near them. The best of higher education is its acquaintance with higher manhood. With every year the price of

city lots in Berkeley rises. It is not the climate nor the view of the Golden Gate nor the gold of the Sierras to which this advance is due. It is because there are men in Berkeley whom people want for neighbors. They wish to be where men think and they wish to share the thoughts of thinking men.

Regent Horatio Stebbins, in presenting the insignia of office, the keys and robe, to the President, said:

I offer you the symbols of your office in accordance with the traditional customs of Universities. They are not the symbols of a political office, but an office of the mind—they symbolize the duty to cultivate and develop the mind, to inspire a love of truth and raise the standard of thought and action. This robe is the symbol of dignity and purity, no conceit of power or moral grandeur, it has its glory in itself. May the blessing of heaven rest on you; may you live long to benefit the University. Long live the University; long live the State.

President Kellogg's address was in brief as follows:

Among educational foundations a State University is practically and emphatically a public trust. It is in the interest of no individual, no family held together like a Scottish clan, no combination of men, no set of theorists, no political party. no religious order or denomination. The University is of the people, for the people and by the people. Of the people in its establishment, in its recognized place through legislation. For the people in its very existence. By the people in its administration. The people elect the Governor, the Governor names the Regents, the Regents appoint the Faculty. All concerned in its management are open to public criticism, and in this State certainly they are sure to receive it Nor is our University a special organization for a favored few among the young people of the State. It is not for the sons and daughters of the rich. It is eminently for those in moderate circumstances, young men and women who are obliged to make their own way in the world. Other young people—the whole community are better off for the further education of the college-trained. There will be more soundness in society, more high-mindedness in office and in stations of influence. more safety for republican institutions.

WOMEN AS REGENTS AND TEACHERS.

As to the duties of the trustees, it is the duty of the Governor to select good Regents—I was about to say good men, but there are those who think that one or two good women might not be out of place in the regency of a co-educational institution. The Regents should select good teachers for University work. Careful choices should be made and good work should be a condition of continuance. In the appointment of teachers there is a still more plausible ground for the claim that there should be a recognition of both sexes in the management of a co-educational University. Regents and teachers have the joint responsibility of securing the best advantages for those who come to be taught. A University is not an easy thing to build. It is many sided, and on each one of its sides it stretches out eager arms for more instruction, for larger equipment, for more numerous investigators and teachers. The older sciences are making new developments. The philosopher now needs his well-equipped laboratory for experimental psychology. Higher mathematics, physics and chemistry have been advancing rapidly. Research is the modern watchword and the fruits of research were never so abundant.

THE UNIVERSITY MUST BE PROGRESSIVE.

All that is new must be taken up, if it is worth taking, by the University of to-day; but it cannot ignore the treasures—it need not scorn all the methods of the past. The choicest influences in our literature, and art, and philosophy, are still due to the peerless singers, and artists, and philosophers of the Greek race. What our University must do, therefore, is to gather up the treasures of the past and add to them the fast accumulating treasures of the present. The students of the University have their part as trustees of this great public trust. They receive much more than at the time they repay to the State and community. They are reaping rare advantages. The good repute of the University rests largely with them It is for our own students to emulate the high standards of the best institutions, to cherish the sacred flame of learning and science, to become men and women in mental and moral not later than in bodily stature.

PRIVATE BENEFACTIONS NEEDED.

The State of California has thus far been very generous, but in some way the State bounty ought to be supplemented by further provisions. Who shall make these additional provisions? Who but the men of means and of public spirit; men who see the need of these opportunities for culture; who appreciate the value of letters and science, of refinement and power. Those who have abundant wealth can do most for the public good, but there are ways in which lesser gifts can be made to help. Especially is there a call for personal aid to those whose path is full of obstacles. Poor students are apt to be the best students.

The wealthy and the well-to-do are pouring in their rills or their full streams of beneficence on many an institution of learning and Harvard and Yale, Stanford and Chicago, serve as examples. James Lick, S. G. Hastings, Edward Tompkins, Henry D. Bacon have linked their names to this University. Other men are in the line of noble succession. Yet the University calls loudly for expansion in many branches of science and instruction. It needs a whole school of biological investigation, another for philosophy, a like endowment for oratory. It greatly needs a number of new buildings. At first our Assembly hall held the students and their friends; now it holds but half the students. This building in which we meet, intended for other purposes, is quite insufficient for public occasions. If we give all the students a place we shut out most of their friends. If we let in the friends we shut out the students. Our very prosperity has brought us into straits. The professional schools also are greatly in need of enlargement in their homes and in their facilities. I recognize the helpful and stimulating influence of a strong sister University, whose greetings we have received to-day. And I firmly believe that it is in our power as a University, to do greater things than we have ventured to hope. It needs only that all the Trustees of this great educational trust shall be faithful thereto; that we build for the coming events of California, and thus lay foundations for the temples of knowledge and truth and righteousness—temples which are to be, we trust, the glory of the new century to whose borders we are almost come.

So begins the second quarter of a century of the University's life. A member of its first Faculty is now at the helm. The garnered experience of these years of growth, the generous encouragement ex-

tended by a great commonwealth, the stimulus of a keen rivalry justify us in feeling that, "it rejoiceth like a strong man to run a race."



CALIFORNIA STATE UNIVERSITY.

San Jose.

In one of our recent articles we mentioned the fact that the standard for admission into the State Normal had been raised.

There are facts underlying this that are of vital interest to us all.

For two or three years Professor Childs has complained that every year, at least five months are wasted in elementary work which the pupils should have thoroughly mastered before they left our public schools.

Professor Childs said:

"This year we determined to make our question embody a test for the training given in the public schools in the fundamental work of each branch. The questions are all simple, and if the students had been thoroughly taught in the rudiments of their grammar-school they could pass creditably. The result, however, of this examination shows that the public schools over the State have been neglecting the fundamental work, for in arithmetic 50 per cent. of the applicants failed to make 65 per cent., or the required percentage, in geography 60 per cent. failed; while in grammar 73 per cent. failed to make the required percentage, and were thus debarred from entering the normal."

These applicants represented 18 counties, and some held Grammar Grade Diplomas, having passed the required year in the high school.

The following were the questions:

ARITHMETIC.

1. Analyze each of the following examples: (a) At 24 cents each, how many apples can be bought for 10 cents? (b) If 5 apples cost 15 cents, what is the cost of 3 apples?

2. Why does dividing the denominator of $\frac{3}{8}$ by 2 multiply the fraction by 2?

3. Solve and explain the following? (a) Divide $\frac{5}{8}$ by 4. (b) Divide .02 by 5000.

4. Write the following decimals, using figures: (a) One hundred five ten-milliionths. (b) Five thousand and thirteen thousandths. (c) Three hundred and two hundred-thousandths. (d) Three hundred and two hundred-thousandths. (e) Three hundred two hundred thousandths.

5. What per cent. corresponds to the fraction of ¾? to ⅝? to 3-500?

6. (a) Sold papers at 5 cents, gaining 66⅔ per cent. What did each paper cost me? (b) At what rate must I sell oranges that costs me 20 cents per dozen to gain 75 per cent?

7. A real estate agent sells a town lot for me and after deducting his commission at 5 per cent. sends me the balance, $475. For how much did he sell the lot?

8. Find the amount at simple interest of $350 at 8½ per cent. for 3 years, 11 months and 17 days?

9. Explain why the area of a rectangle 6 feet long by five feet wide is 30 square feet. Do not give a rule as explanation.

10. If 2 3-5 tons of coal cost $19.50 what is the cost of 6⅔ tons at the same rate?

GEOGRAPHY.

1. Draw a circle and upon it the proper lines to represent a hemisphere divided into zones. Upon each line write its name and upon each zone its width in degrees.

2. Give, mentioning the names of States and Territories, the sections of this country that are noted for wheat growing, cotton growing, cotton manufactures, stock raising, iron mining, silver mining, coal mining.

3. Mention a commodity we import from each of the following places: Havana, Hong Kong, Rio Janeiro, Belfast, Bordeaux.

4. Name the countries of Europe, telling the government of each.

5. What natural boundary is there between New York and Canada? Indiana and Kentucky? Mexico and Lower California? Chile and Argentine Republic? Norway and Sweden? Russia and Siberia? Italy and France? Arabia and Egypt? France and England? England and Ireland?

6. What and where are the following: Suez, Odessa, Congo, Melbourne, Thibet, Elbe, Borneo, Azores, Greenwich?

7. Sketch an outline map of North America and upon it indicate the location of the principal mountain ranges and river systems.

8. What are the uses of a river? What part of a river is generally navigable, if it be navigable at all?

9. In what zone is Africa? What is the largest island near Africa?

10. Name and locate five cities made famous by universities or other institutions of learning.

GRAMMAR.

1. Name the part of speech and the office in the sentence of each word in the following: What can one say to make him more earnest as a student?

2. Correct the following, giving briefly the reasons: (a) He knows the phenomena which produces the result. (b) Greece is a peculiar shaped country. (c) She was a girl of about fifteen years old. (d) If we watch ourselves, we will find that we need a greater supply of adjectives.

3. Write a sentence having an adverbial clause, and an adjective phrase. Underline each.

4. What relation exists between the subject and the attribute complement of a verb? Illustrate, underlining both subject and attribute complement.

5. Put into sentences the relative pronouns *which* and *that*, underlining the pronouns and antecedents.

6. Write at least half a page on some recent event of public interest.

The publication of these questions and Prof. Childs' statement, in the *San Jose Mercury*, caused a considerable stir in educational circles in this city.

At a recent conference of the Normal Faculty, with County Superintendent Chipman, City Superintendent Russel and Prof. Manzer, members of the Santa Clara County Board of Education, a discussion was held which seems to be of such interest as to warrant the publication of the proceedings.

While differing in some minor points those present agreed on the following statements:

1. The teachers in the public schools of California are, as a body second to no other public servants in their faithfulness and competency.

2. That while we are gratified at the constant improvement in our public schools, we realize that they still fall far short of accomplishing ideal results.

3. That the methods of instruction are still to a large degree such as tend principally to the exercise of the child's memory. That too much stress is put upon acquiring knowledge, and too little upon such school work as shall give the child the ability to use knowledge, and develop that power which shall lead him to reason, and to form simple judgments.

4. That promotions based on final examinations solely, tend to make both teachers and pupils attach too great importance to knowledge, and too little importance to a kind of ability and culture that cannot be expressed in written examinations.

5. That much more could and should be accomplished by teachers in the direction of studying the character, capacity and culture of individual pupils, and adapting methods of instruction and management to the powers and needs of the individual.

6. That teachers are often required to take charge of so many pupils that individual attention is next to impossible, and that good results can not be expected in schools having more than thirty to thirty-five pupils to each teacher.

7. That a false idea of economy that leads the public in some cases to furnish insufficient school accommodations does much to prevent the attainment of good results in our public schools.

8. That the course of study should be shortened by dropping out non-essential parts from the various subjects, especially arithmetic, grammar and geography, and by more clearly distinguishing between the *more* and the *less* essential.

9. That elementary science taught from nature, drawing and hygienic physical training are essentials of public school work.—S.

Correspondence.

JACKSON, CAL., February, 1893.

Editor P. E. Journal:

DEAR SIR: I have a class in Percentage which has recently been working in "Discounting Commercial Paper," Exercise 243 in the State Series Arithmetic. We found that the answers in the new books were different from those in the old ones. Can you tell me why this correction was made? Also what method the compilers intended should be used to obtain answers as revised.

C. T. B.

ANS.—The changes in answers were made because of the introduction of the third principle in the rule as given on page 218 of the latest edition. Banks count the actual number of days from date of discount to date when note is due. This practice should be followed to get correct results. In first edition of arithmetic, some errors in answers are typographical, some occurred because the third principle above mentioned was not followed in the solution.

The following are the revised answers to problems in Exercise 243:

1.	$ 690 51	2.	$841 22	3.	$1426 23
4.	907 84	5.	247 50	6.	1835 20
7.	519 61	8.	297 51	9.	1140 64
10.	1350 17	11.	729 77		

Solution of Exercise 6 :

$1850 due Aug. 1. Disc. for 24 days=4-5ths of $18.50.

Disc. July 8th=$14.80.

Has 24 days to run=4-5ths mo. $1850—$14.50=$1835.20. Proceeds July 8th.

$1850 base—1 per cent.=$18.50 discount for 30 days.

EDITORIAL.

Legislatorum est justas leges condere.

The Omnibus Educational Bill.

ITS PROVISIONS.

This Bill which passed without any opposition contains the amendments agreed upon by the Biennial Convention of Superintendents, additional changes proposed in various bills introduced by members, and simplifications, adjustments, and further new features by State Superintendent Anderson. As completed it was recommended by the Joint Educational Committee of the two Houses, and with this backing its passage was an easy matter. The chief changes are indicated in italics and comments that follow.

SECTION 1503. This section provides that holders of California State Normal School diplomas *shall be entitled* to grammar grade city or county certificates. It also provides that the holders of such diplomas, after two years' successful experience certified to the State Board by a County or City Board shall receive from the State Board a "*document*," which document attached to the diploma shall become a "*permanent certificate*" of qualification to teach in any primary or grammar grade school in the State. Further, that the holder of such diploma upon completing the prescribed course of study in the Pedagogical Department of the State University *shall be entitled to teach in any high school in this State*, except where the holder would be required to teach languages other than the English.

HIGH SCHOOL BILL.—The present high school laws are repealed, and two new sections (1670, 1671) are added to the Code covering the whole matter of the creation, management and maintenance of high schools, District, Union and County. These sections, with comments upon the same, will appear in the May JOURNAL.

SECTION 1520. EDUCATIONAL AND LIFE DIPLOMAS.—A *four-fifths* vote of a County or City Board is required for recommendation to the State Board. The fee for life diploma is reduced from three dollars to *two* dollars.

SECTION 1560, 1561, 1564. TEACHER'S INSTITUTES.—*Institutes may be held in counties having less than twenty districts*, in the discretion of the superintendent. He *must* call an institute in such counties *when directed to do so by the County Board of Education*. The Superintendent may draw his warrant upon the County School Fund for the expenses of an Institute for an amount not to exceed *two hundred* dollars for any one year.

SECTION 1565. FEE FOR CERTIFICATES.—Teachers must pay a fee of two dollars for *renewal* of certificates.

SECTION 1577. NEW DISTRICTS.—Can be formed only between *the first day of December and the fifth day of April; provided, that the provision requiring that the petitioners shall reside a distance of more than two miles by a traveled road from the said public school house may be dispensed with when the petition shall be signed by the parents or guardians of fifty or more census children residents of a district containing more than three hundred census children.*

This will permit the formation of new districts in the suburbs of large towns and cities if there are sufficient children to form a strong school.

SECTION 1581. School must be opened in the new district not later than the *second Monday of September.*

SECTIONS 1593 and 1599. ELECTION OF TRUSTEES.—This election must be held on the *first Friday* of June of each year. The election must be *held without reference to the General Election Law with regard to nominations, form of ballot or manner of voting.* This means that the so-called Australian Ballot Law shall not hold in school elections.

SECTIONS 1617 AND 1634. SCHOOL CENSUS.—Census marshals shall be appointed *on or before the first day of April*, and the census shall be taken between the *fifteenth and thirtieth of April*, a month earlier than heretofore.

SECTION 1665. COURSE OF STUDY.—In districts having less than *one hundred* census children the County Board of Education may abridge the course of study.

SECTION 1696. THE FILING OF DIPLOMAS.—The holders of California State Normal School, Educational or Life Diplomas need not file their diplomas in the Superintendent's office. The Superintendent, upon presentation of the diploma, simply records the name of the holder in a book provided for that purpose, and issues a certificate.

Boards of Education and Boards of Trustees *must, in every case, give the teacher two weeks notice of their intention to close the term of school.*

SECTION 1698. DISMISSAL OF TEACHER.—A teacher dismissed before the expiration of any oral or written contract, and reinstated by the Superintendent *shall be compensated for time lost pending the appeal.*

SECTION 1699. TEACHER'S VIOLATION OF CONTRACT.—Should any teacher employed by a board of School Trustees for a specified time, leave the school before the expiration of such time, without the consent of the Trustees, in writing, said teacher shall be deemed guilty of unprofessional conduct, and the Board of Education of the county are authorized, upon receiving notice of such fact, to suspend the certificate of such teacher for the period of one year; should said teacher be the holder of an Educational or a Life Diploma, the Superintendent of Schools shall report the delinquency of the teacher to the State Board of Education who are thereupon authorized to suspend said diploma for the period of one year.

Teachers have called for protection from the hasty, ill-advised and prejudiced action of Trustees. This amendment is intended to protect the district from those teachers who are only too ready to leave a school at any time when a better salary or more favorable location offers.

SECTION 1712. IMPORTANT TO AGENTS FOR SALE OF APPARATUS AND BOOKS.—All orders of the Trustees and of Boards of Education for books or apparatus must in every case be submitted to the Superintendent of Schools of the county or city, or city and county, respectively, for his approval, before said books or apparatus shall be purchased.

SECTION 1713. THE LIBRARY FUND—A RADICAL CHANGE.—Except in cities not divided into school districts, the Library Fund shall consist of not less than five or more than ten per cent. of the *County School Fund* annually apportioned to the district; *provided*, that should ten per cent. exceed fifty dollars, fifty dollars only shall be apportioned to the district; *and provided further*, that the School Trustees of each district in the county shall, in the month of July in each year, notify the Superintendent of the county as to what amount they desire to be apportioned for their respective districts for the year.

SECTION 1543. LAPSED DISTRICTS.—Districts shall be declared lapsed by the Board of Supervisors upon report of the County Superintendent when the attendance is five or less during the whole school year. Adequate provision is made for the payment of the indebtedness of the lapse of district.

JANITOR. Superintendent shall draw requisition for janitor in case the Trustees fail to do so.

SECTION 1768. THE COUNTY BOARD OF EDUCATION—ANOTHER RADICAL AMENDMENT.—"At their last regular meeting preceding the first day of July in the year eighteen hundred and ninety-three," the Board of Supervisors shall appoint four members of the Board of Education.

This virtually legislates out of office over one hundred persons in the State. The reason assigned is that things are "mixed" in a number of County Boards in the State because of irregular appointments, and this bit of legislation is intended to "straighten" matters by starting all *de novo*. What provision is made that confusion will not arise again does not appear.

COMPENSATION OF MEMBERS OF THE BOARD.—The Board of Supervisors shall allow to each member of the County Board of Education a compensation of five dollars per day for his services, and the same rate of mileage as is allowed to the members of the Board of Supervisors of the county.

Why any distinction should have been made all these years, in the matter of mileage, between members of the Board of Education and members of the Board of Supervisors does not appear in reason. It can only be accounted for on the notion that the work of the Board of Education is immaterial and unimportant, or that school men have left matters of legislation affecting themselves to chance. The per diem alone in many instances does not pay the expense of a trip to the county seat. The amendment is therefore manifestly just.

SECTION 1771. Grammar grade certificates will hereafter be valid for six years. This adds to their value by doubling their term, and ought to reconcile teachers to the payment of a fee for renewals. It

will also stimulate the holders of primary grade certificates to secure a higher grade.

SECTION 1775. This section relating to the granting of certificates upon credentials shows very important changes, the fruitage of discussions at Institutes, State Associations and Biennial Conventions. In the first place Oregon and Washington State educational diplomas are to be recognized. Again, the hand of the State Board is to be felt as shown in the following significant language:

And to graduates of any other institution in the United States which the States which the State Board of Education of this State shall have recommended as being of the same rank as the State University of California, when the diploma of graduation from said institution shall be accompanied by a recommendation from the Faculty thereof, showing that the holder of the diploma has had academic and professional training equivalent to that required by the State University. The general conditions on which such recommendations may be accepted by the County Boards of Education as fulfilling these requirements, shall be prescribed by the State Board of Education. Second—Whenever any holder of a diploma from the State University shall present to the State Board of Education satisfactory evidence of having had two years' successful experience as a teacher subsequent to graduation, accompanied by a recommendation from the Faculty of the State University, showing that said graduate has completed the prescribed course in the Pedagogical Department of the State University, the State Board of Education shall grant to the holder of said University diploma a document signed by the President and Secretary of the State board attached thereto, shall become a permanent certificate of qualification to teach in any primary, grammar, or high school in the State; valid until such time as the said document shall be revoked by said State Board of Education, for any of the causes shown in subdivision four of section one thousand seven hundred and ninety-one.

SECTION 1817. COUNTY SUPERINTENDENTS ESTIMATE SCHOOL FUND NEEDED.—"The minimum amount shall be such a sum as will be equal to six dollars for each census child in the county."

The importance of this increase will be appreciated when the fact is recalled that up to four years ago this minimum amount was *three* dollars. At that session of the Legislature it was raised to *four*, now *six*.

SECTION 1830. Elections for a special school tax must be held before the fifteenth day of August, *provided* that where a tax has been collected to build a school-house, and the erection of said house shall not have been commenced within two years, the money shall be returned to the tax-payers.

To summarize: The chief features of the legislation embodied in the Bill are—

(1) A strong High School law.

(2) A change in the source, and a very probable reduction in amount, of the Library Fund.

(3) An attempted return to State uniformity in certificates.

(4) A marked recognition of the value of the work of our State University and State Normal schools.

(5) A reorganization of County Boards.

(6) Change of date of school election and of school census.

(7) Very material increase in County School Fund.

(8) A general harmonization of the law.

The Library Fund.

A determined effort was made to introduce an amendment into the Educational Omnibus Bill, leaving the establishment of a library fund optional with Boards of Trustees. To any one at all acquainted with the situation it is plain that under such a law no provision would be made for library purposes in hundreds of districts in the State. Indifference, lack of appreciation of the value of a library, the plea of economy, all would have contributed to the deplorable end. The generous provision for library purposes made by the State has long been our pride and boast. That the attempt should have been made at this time to work so serious a change, a time when the fund is put to better use than ever before, indicates the necessity for constant vigilance on the part of friends of the schools. That one long identified with the public schools of the State should have advocated this change seems almost unconceivable; it was nevertheless true. Such a blow was vital, without excuse, and of the color of treason.

Senator Earl, of Alameda, and Assemblyman Bennett, of Orange, called the attention of members of the committee to the consequences of such an amendment. Superintendent Anderson realized the situation and with commendable vigor and promptness assisted in killing the amendment in committee. The section as finally amended will be unsatisfactory to many and another Legislature will probably restore the old law in language or effect.

Superintendent Anderson.

This Bill was the apple of the Superintendent's eye. It represented the crystallization of his thought and experience on educational lines running through more than a third of a century of a varied career. It especially embodied the conclusions arrived at during two busy years in his present high office. It was in the main what, in his deliberate judgment the schools need. His interest in its formation in

committee and its progress through the Houses was intense. His satisfaction at the dispatch with which it was finally passed was unconcealed. He was determined to break the ground for freer professional action and to elevate the standard by recognizing special training. With the experience of an extensive correspondence necessitated by the vagueness of the law he sought to eliminate inconsistencies, remove contradictions, introduce harmony, add strength and establish the law as a complete whole.

By the time the Bill had passed to third reading in the Senate he had indexed the law as amended and was ready to give it to the printer. He is painstaking, methodical and diligent and whatever criticism may be made of particulars in the Bill, it is yet true that he has given the schools the most thorough, general revision of the law that has been made for a decade.

IN response to an advertisement of Houghton, Mifflin & Co., a number of excellent articles on The Value of the Study of American Literature in the Public Schools, were sent to the JOURNAL. The committee appointed to decide gave the award to Mary Sackett, Pacific Grove.



J. W. ANDERSON, - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - Deputy Superintendent of Public Instruction

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[Superintendent Anderson is so busy preparing the new blanks to be sent to school officers, that he has not been able to furnish copy for this number of the JOURNAL.]

CALIFORNIA SCHOOL ITEMS.

THE citizens of Amedee, Lassen county, want to raise $4,000 for a new school-house.

CO. SUPT. MARTIN reports 233 volumes already in the Sonoma County Teachers' Library.

KNOWLES, Alpha, Cleveland, and Sunnyside school districts were organized in Fresno county during March.

THERE are 528 pupils enrolled in the Monterey and Pacific Grove schools. In 1887 there were but 190 enrolled.

SUPT. SWETT, of San Francisco, is holding a very interesting series of weekly meetings of the teachers of the various grades of city schools.

HOPKINS ACADEMY, Oakland, has been incorporated, and is seeking a new site upon which to erect buildings needed to enlarge the facilities to be afforded.

ELK HORN district, Mariposa county, has voted bonds for a new school-house. Pleasant Valley district, in the same county, has built and furnished a neat school-house.

PROF. GARIN, of the Oakland School Department, has been appointed vice-president of the Dept. Congress of Industrial and Manual Instruction of the World's Fair.

IN 1860 there were 22 male and 16 female teachers employed in Alameda county, and the number of pupils enrolled was 774. In 1870, there were 18 male and 38 female teachers, and an enrollment of 3,680 pupils. In 1880, the number of male teachers was 44, female teachers 137, pupils enrolled, 11,760. In 1890, there were 47 male teachers, while the number of female teachers had increased to 268, and there were 17,797 pupils attending the schools. In 1892, there were 53 male and 309 female teachers in the county. The total value of the public school property in 1893 was $1,103,678; in 1880, $544,210; in 1870, $180,160; in 1860, $9,270.

Prof. Chas. H. Allen, Superintendent of the Educational Exhibit, has gone to Chicago, to plan the exhibit properly. Some excellent work has been received. Not all the counties sent specimens, but the material received fairly represents all sections of the State. The Commissioners will keep an office for some months to come in Room 75, Flood Building, S. F. Further communications relative to the Exhibit should be sent to P. M. Fisher, Oakland, Cal., Chairman of Ed. Ex. Com.



E. T. PIERCE, Principal Chico State Normal School.

(Principal-elect Los Angeles State Normal School.)

THE

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CURRENT EDUCATIONAL THOUGHT.

Truth is tough. It will not break, like a bubble, at a touch; nay, you may kick it about all day, like a football, and it will be round and full at evening.—HOLMES.

What the higher schools and colleges need is to give more attention to their own work and less to the schools below. When this is done they will have more students, and they will be better taught.—MADISON BABCOCK, Deputy Supt. of Schools, S. F.

Recurring examinations should show whether teachers are growing in culture and skill, whether they are advancing professionally and are abreast of the pedagogical thought of the times, or whether they are dropping into dreary routinism.—Supt. FRANK B. GAULT, Tacoma, Wash.

I venture to prophesy that the day is not distant in which a new ideal shall reign and the preparation of the teacher shall consist of knowing all he can of each child *as he is and as he ought to be*, studying the best way to secure the *ought to be* out of the *is*.—A. E. WINSHIP in *New England Journal of Education*.

Healthy development cannot go on without some amount of direct sympathetic insight on the part of the teacher. It is not only that the wrong words must not be spoken, but the teacher must learn how to make his influence felt by his mere presence. There is a force in character which underlies and is superior to all spoken words. And indeed, words are only useful in so far as they correctly embody this subtle force. A teacher can never be successful who does not consciously or unconsciously develop this force in himself, and learn how to use it.—SARA CORBETT in *London Journal of Education*.

No educator of any standing in the known world, if he gave you his opinion on drawing, but would say it is one of the great means of education for the people. No city in the world in which the school management is intelligent, no city in the world worthy of the name, but has in its schools the subject of drawing."—COL. PARKER, in joint debate upon Chicago "Fads."

The hand is the most marvelous instrument in the world. It is the necessary complement of the mind in dealing with matter in its varied forms. It is the hand "that rounded Peter's dome;" it is the hand that carved those statues in marble and bronze, which we travel into distant lands to admire; it is the hand that enables the mind to realize in a thousand ways its highest imaginings, its profoundest reasonings and its most practical inventions.—JAMES MACALISTER.

I cannot teach a philosophy of history, because I have none of my own. Theories shift from generation to generation, and one ceases to believe in any of them. I know nothing of, and care nothing for, what are called the laws of development, evolution, or devolution, extension of constitutional privileges from reign to reign, to end in no one knows what. I see in history only a stage on which the drama of humanity is played by successive actors from age to age.—FROUDE in Oxford address.

The members of the Department of Superintendence in the National Educational Association represent the different sections of the country, and by the training of the young which is their occupation they will affect the destiny of the nation more than the body that sits in Washington. Of these men Dr. Harris is the educational philosopher, Judge Draper the educational statesman, Andrew J. Rickoff the model superintendent, Colonel Parker the educational yeast.—ALBERT P. MARBLE, Worcester, Mass.

The students recognize the fact that facilities and opportunities for advancement do not guarantee advance. There must be spiritual forces to seize the advantages—a force from without in public faith and encouragement, a force from within the college in the loyalty and earnestness of students and faculty. Because these spiritual forces are at present active and developing in strength, the students are confident of the constant progress in the University.—CLARENCE W. LEACH on behalf of the students, Charter Day, University of California.

The clue to the whole position is harmony of aim between teacher and pupils—the full realization on both sides of the fact that they are

working for a common end; the substitution of a spirit of brotherhood for the spirit of competition. A child of ordinary intelligence is perfectly capable of seeing the absurdity of trying to thwart a teacher who is endeavoring to help him. He does see this absurdity if he is convinced that the teacher is really trying to help him, and not working for the teacher's own private ends. But since the power is in the hands of the teacher, it is he who must strike the keynote of work for a common purpose. In order to do this, sympathetic insight is necessary, and this includes much more than a simple wish to help. It includes also an intuitional perception of common needs and of special needs—a habit of noticing tendencies and mental processes which lie below the surface. The intuitional perception, then, of the mental needs of others is one of the most important qualifications for a teacher. —SARA CORBETT in *London Journal of Education.*

The laboring class lies at the root of the State. It is the foundation of the social structure. In my judgment the bulwark of the State is an industrious, intelligent, contented, and not over educated yeomanry. Intellectual education by enlarging the scope of the human outlook breeds artificial wants, cravings and desires. Who will then do the drudgery and perform the menial work necessary to the existence of the highly educated and refined? By filling the yeoman with ambitions that cannot be realized, we make of him a labor agitator, a socialist or nihilist, and imperil the safety of the State.

Public education as now carried on in our common schools has no restraining influence on crime. It is a sharpening of the intellect—a weapon as powerful in the hands of vice as of virtue.

It is not necessary to tear down our public school system but to remodel it. As it stands its lower grades deal too much in theory. The common school curriculum should be reshaped upon lines reaching from the rudiments of an English education coupled with ample technical instruction in the lower grades to the highest and broadest practical and theoretical university instruction. To the vast bulk of our youth who drop out in the lower grades, there should be given an industrial education. Add to this elementary instruction in the science of government and the principles underlying the institution of property.—Hon. JOHN R. GLASCOCK, in address at the University of California, Charter Day.

GENERAL DEPARTMENT

Apperception.

ELMER E. BROWN, UNIVERSITY OF CALIFORNIA.

[The San Francisco University Extension class in Pedagogy has been studying, among other topics, that of apperception. A short time ago a number of essays were handed in on the subject: "The Bearings of the Doctrine of Apperception on the Practice of Teaching." The following extracts from these essays may not be without interest to other teachers.—E. E. B.]

By apperception is meant the process of gaining new ideas by means of the old. To apperceive new ideas the mind must have, in conscious possession, ideas related to the knowledge to be acquired. * * It seems to me that no teaching can be highly successful in which, even if the teacher has never heard the term, the principles of the doctrine of apperception are not constantly applied.

From the first day that the child is in school it is essential that all new knowledge shall be closely connected with that which he already has. * * It amounts to a constant review of important points. Old knowledge is worked over, and instead of fading from the mind, it becomes ever clearer and broader. New knowledge is readily grasped and speedily put where it belongs. * * This welding of old and new knowledge teaches the pupils to think and causes the mind to be stored with true knowledge, which is well organized knowledge. * *

Now that the programme is so crowded, how to save time is a great problem. If before taking up a new lesson, the teacher recalls everything in the past work of the class that is connected with and so helpful in grasping the new ideas, she can certainly save much time when preparing the class for the new work. Having these things clearly in mind, she is ready when she has started the children to thinking, so to guide them as to bring out all these points clearly, connectedly and quickly. * * The value of the doctrine of apperception on the practical problems of teaching cannot be better shown than by an example found in a single pupil of the writer of this paper, and now under her care.

This pupil had been found to be unable to do the work of her grade in arithmetic, though capable of maintaining a fairly good standing in other branches. She belonged to that class of children usually designated as "dull in arithmetic."

A careful study of her case developed the fact that all her previous work in numbers had been a matter of memory alone. No other power of her mind had been called into exercise. It was quite evident that she had no real knowledge of the subject, upon which to build.

The course followed was, to give just such real knowledge of numbers as one would do to a very young child in showing him the actual difference between one object and two objects. This gave a basis, and then the work of utilizing it according to the doctrine of apperception was commenced. The gain in power, while it has not been rapid, has been really wonderful. The child's interest has been aroused, and she delights in the new relations in numbers that unfold themselves to her along the line, as additional facts are presented. * *

This very afternoon, in copying some Greek words for a friend, not one of which had any meaning for me, I have experienced the cruelty of setting children to work "copying" something for "busy work," which they do not understand. It is positively criminal to set a child to do a task without his having any connecting link whatever between the old and the new knowledge. With all the ancient (?) philosophy which I can bring to bear upon my task of this afternoon in copying what was utterly unintelligible to me, I feel worn out with the exertion. No wonder the children become restless and noisy under such a hardship. No wonder that the teacher's object—usually to obtain a few quiet moments in the school-room—is never attained, but that the contrary result is always reached.

A child twelve years old came for her first lesson in piano playing. She is supposed to have had some teaching before, but I found almost no evidence of it. A page of printed music was placed before her, and I asked for the first thing printed on it. Titles and punctuation she read without difficulty, but the first musical sign was an insurmountable barrier. One hour was taken up with this much of the page. I played blind man, and she succeeded in telling me what the signs were in form, but knew no names, or at least no sense in what she could name.



I hunted for illustrations in her mental store house and

found this. During the last great gale men put up timbers against fences to keep them in place in spite of the wind. Our sign did a little work, and she had heard of a "brace" before, so put this into the lot of braces and had it safe. { What is this?

| was the next thing we found. She had seen bolts on doors, long sticks across shutters,—"bars" to keep cows in or out of a field. So she put this sign in with the "bars" which held things together, and had the idea of separation left to hook the same sign on when we reach it later.

What a "staff" was she had no idea, save what it looked like. The name she knew as a word. Lame men carried canes or sticks, long sticks helped us to climb mountains, these latter sticks were "staff." What did they do? Men leaned on them. But what was the "staff's" part? (I leaned upon the piano). It held men up. She knew what was done with our sign, so the name began to mean something to her. Next time we will find that the "staff" holds things as strings do beads, and as the pigeon-holes of her father's desk hold letters.



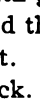
These signs she called "clefs." What were they? Blank silence. I pulled out my bunch of keys. A French boy would call them "clefs." What were they for? To open things. When she went home she must have one to get into the house. A key which opened a door was a door-key; a box, a box-key, etc. Why was  a "G key (clef)?" Opened a G, doubtfully. She made a staff and I put some notes on it. What were they? G, A, E, etc. Sure? No; she didn't know what they were. Why? No "clef"—with a sudden illumination of the face. I put in the "clef" and she could tell the notes. Why? No idea. I put a key into what? Keyhole. I did it at the music cabinet. The drawer was unlocked, and we could get what was inside. What kind of a key used? Drawer key. She caught the force of the illustration, for we had been making  beginning at the marked point, which served as a key-hole, and thus we unlocked the line G.



We shall see that the name is only of a note written on the line, and not of the line itself as she found when I wrote notes without a "clef." She knew what she called the names of the lines and spaces before, but now she had the clue to how her

knowledge was attainable at first hand. She went through the process and made the facts her own.

We then took up the F clef, and she applied her past experience to that with great success.



But what did that stand for. We stretched a rubber band and snapped it. It made a noise. It swung back and forth like a hammock. I snapped a bass string of the piano. She saw it move and heard it sound. She heard a shorter string sound, but it moved too quickly to see. One which swung or vibrated just a certain number of times in a second made a certain sound called G', and that was always meant by



Our time was gone, so I gave her something to do at home on paper, and with her fingers (her eyes shut tight), and she departed with a funny sort of smile all over her face.

American Literature in Public Schools.

[We publish below the essay of Miss Mary E. Sackett, of Pacific Grove, Cal., which was awarded the prize in the "American Literature Essay" contest. Ed.]

One of the brightest features in the future outlook, as the last decade of this eventful century is rounding it to completion, is the increasing attention paid to American literature.

Only within a few years, have the critics been willing to admit its existence. Long accustomed to look with a species of sacred awe upon the masterpieces of the classical and Elizabethan eras, it savored of sacrilege to dare enshrine occidental genius in the galaxy of the immortals. Touched by the light of modern experimental research, the subtle casuistries of Greek logic, the mythological materializations of dimly apprehended truths, have experienced wide transformations. To the advanced student, the lore of the past will always be a treasure house of rare wisdom.

But for the American boy, the American girl, American literature, "the survival of the fittest," with its profound scholarship, its elegant and graceful language, its lofty ideals, possesses immeasurably greater value. The brilliant coterie of writers that were born with the century, have grown with its growth, and passed away with its close, are both the outcome and exponent of American ideas. Pure and stainless in their lives, they never truckled to the low or base, or stooped for favors to wealthy potentates. The only sovereigns to whom they

own allegiance are their country, and liberty—liberty in its freest, fullest sense, not only demanding that the shackles should fall from every slave, but that thought should rise untrammeled as the folds of the stars and stripes when flung to the morning breeze. Strong and courageous, fearing not to rebuke wrong, they are still tender and true, their affections clinging round their homes and firesides. Sorrow and desolation may come to them, but never despair. Sweet resignation brings healing on angelic wings. With no shadow of cant or bigotry, the human need recognizes the Divine helper.

As landscape artists they paint with realistic brush the infinite loveliness of mountain and meadow, lake, streamlet and vale, from leaping Minnehaha to wave-washed Appledore,

"And the blue-eyed gentian looks
Through fringéd lids to heaven."

while the Rhodora's rosy bloom

"Is its own excuse for being."

Our great poets are naturally grouped together, because their favorite haunts have the same classic shades, they developed under kindred influences, were animated by the same grand purposes, and their varied voices blend in harmonious song. Bnt each has special gifts. From the simplicity of the Quaker poet, to the versatile Lowell, equally at home in the Yankee dialect of Bird O'Freedom Sawin, and the exquisite versification of Sir Launfal, in the professor's study, and at the court of St. James; from the gentle pensiveness of Longfellow, to the wit and wisdom of Holmes, whose

"Rockets curve their long ellipse,
And burst in seeds of fire;"

from Bryant's groves, sweet with the breath of flowers, and vocal with bobolinks, to Emerson's philosophic solitudes; these the gathered fruitage of the centuries, contain enough to furnish an education.

And it can hardly be begun too soon. Children's minds are quick to catch great truths and beautiful images. A lady of fine literary tastes was accustomed to read to her children from Dana's "Household Book of Poetry." Three year old Rudie could repeat many delightful poems. "The Children's Hour" was a great favorite, and he rendered the line,

"Such a grey old mustache as I am"

with immense gusto.

But many children lack the inestimable advantage of educated

parents. For them the public school must supply all deficiencies. The faithful little creatures plod through dry facts, even the grammar grades furnishing mere skeletons of science, history and mathematics, that await the higher university culture to become endowed with life and symmetry. Literature fills the gaps, cements the foundation, and rears a splendid superstructure, from whose towers are seen visions of the "wide, wonderful world."

The historical references, and numberless allusions stimulate research. Friends, query columns and encyclopedias are brought into requisition. Frequently the whole district is stirred to its center, to furnish the necessary information. "The Ride of Paul Revere" verifies the Revolution, and "Barbara Frietchie" thrills the soul with patriotic fervor. Irving invests the Hudson with a halo of romance. It is no longer simply the river which Hendrik Hudson discovered in 1609, while seeking a northwest passage to the Indies, but Rip Van Winkle is awaking from his sleep in the Kaatskills, astounded at the changes forty years have wrought. Sleepy Hollow is pervaded with dreamy languor, while ancestral ghosts, divested of terror, hover amid the softened gloom.

Much has been written for the young, which though not critically styled literature, still has its sterling qualities. Hawthorne surely has a niche among the immortals, and his exquisitely told tales, enchantingly mysterious, have the lesson so deftly interwoven as to leave no bitter pill of a moral to be taken clear.

Lowell, Holmes and Emerson are mostly too recondite for the common school curriculum, but "The First Snowfall," "The September Gale," "The Mountain and the Squirrel" can be readily grasped by very youthful intellects.

The imagination develops long before the mind moves in syllogistic measures,

"In trailing clouds of glory do we come,"

and it needs direction and guidance, the skillful guidance of a teacher, whose inner nature is attuned to the loftiest melodies. Students looking toward the university need this special preparation. No less do those who enter immediately upon the realities of life. With cultivated tastes the leisure hours can be well spent, and intellectual growth, the main object of education, aside from the professions, and the specialties of mechanical arts, can be continued. Through natural force of character, many rise to commanding positions, and the fa-

miliar fluency of expression thus acquired becomes invaluable. Let the etymologies, grammatical constructions, and rhetorical niceties, be largely left to the High School and University. Do not degrade the study of literature to hateful drudgery, but direct the attention to the noble thoughts, the troops of beautiful images, the rhythmic flow of words. Crown our poets with loving benedictions.

Words.

The robin repeats his two musical words,
The meadow-lark whistles his one refrain;
And steadily over and over again,
The same song swells from a hundred birds.

Bobolink, chickadee, blackbird and jay,
Thrasher and woodpecker, cuckoo and wren,
Each sings its word, or its phrase, and then
It has nothing further to sing or to say.

Into that word, or that sweet little phrase,
All there may be of its life must crowd;
And lulling and liquid, or hoarse and loud,
It breathes out its burden of joy and praise.

A little child sits in its father's door,
Chatting and singing with careless tongue;
A thousand beautiful words are sung,
And he holds unuttered a thousand more.

Words measure power; and they measure thine;
Greater art thou in thy prattling moods
Than all of the singers of all the woods;
They are brutes only, but thou art divine.

Words measure destiny. Power to declare
Infinite ranges of passion and thought
Holds with the infinite only its lot,—
Is of eternity only the heir.

Words measure life, and they measure its joy!
Thou hast more joy in thy childish years
Than the birds of a hundred tuneful spheres,
So—sing with the beautiful birds, my boy!

J. G. Holland.

METHODS AND AIDS.

What We Like: A Question of Grammar.

HERBERT MILLER, PRINCIPAL MARYSVILLE HIGH SCHOOL.

Yesterday morning I received a copy of the Educational News, a paper published in Philadelphia. In its columns three definitions were given of the word *like*, against all of which, in the connection given, I wish mildly to protest. In the following passage the editor declares *like* to be a conjuctive adverb:

(*a*) "'Tis midnight's holy hour, and silence now
Is brooding like a gentle spirit o'er
The still and pulseless world."

In the following sentences: (*b*) The boy is like his father, and (*c*) The boy acts like his father, a contributor calls *like* in (*b*) a prepositional adjective; in (*c*) a prepositional adverb.

I would maintain that in all three of these cases *like* is an adjective, and that any other view tends to confusion and the substitution of a colloquial provincialism for good usage.

A glance at the history of the word will, I think, make this clear. Like in Middle English is *lyk or lik*, in Anglo-Saxon *lic*, and has very similar forms in the other Teutonic languages. In all it is an adjective. Its adverb is formed by doubling itself, *likely* being *like-like*, the adverbial termination *ly*, so common in English, being a shortened form of *like*. In the inflected Anglo-Saxon a noun in the dative case followed *lic*, without a preposition, just as Latin nouns in the dative are governed by *similes*. When, in the change from Anglo-Saxon to English, terminations were dropped, and prepositions substituted, *like* continued to be followed by a noun whose termination was dropped, but the usually substituted *to* was also frequently omitted. In the older writers, however, a preposition is often used, as: "Who is like unto thee, O Lord," and to-day the usage is poetical. In prose and speech, however, the preposition is now almost universally dropped. That does not alter, however, the character of the word; and in (*b*) of the sentences quoted above, *like* is a predicate adjective, and the

omitted *to* understood governs father; in (*c*) like is still an adjective modifying *manner* in the understood phrase, in a manner, and father is governed as before by the *to* understood. The terms "prepositional adjective" and "prepositional adverb" are to my mind confusing and needless. Let us have no more grammatical terms than are necessary. Scientific grammar simplifies and does not complicate. A little study of comparative grammar will show that the principles and the terminology are much the same in all the Aryan languages, and in English the tendency is constantly to greater grammatical simplicity.

The calling of *like* a conjunctive adverb in sentence (*a*) is the attempt to substitute "a colloquial provincialism for good usage" to which I have already referred. *Like* here, as in the other cases, is an adjective modifying *silence*, and the usual understood *to* governs spirit.

I am aware that the Century Dictionary admits *like* as a conjunction, saying: "This use is commonly condemned as incorrect, and is generally unacknowledged in dictionaries. It occurs several times, and not unfrequently in modern writers, and is common in colloquial and provincial usage."

The following passages are quoted:

"But like in sickness did I loathe this food." SHAKS. M. N. D. IV. 1. 118.

"Through which they put their heads, like the Gauchos do through their cloaks." Darwin. Voyage of the Beagle.

Lowell is cited as saying in the introduction to the Biglow Papers, "*Like* for *as* is never used in New England, but is universal in the South and West." And his playful inference that a similar use of *like* by Henry VIII and Charles I established a grammatical rule by royal custom, seems to be accepted as serious.

Almost any grammatical usage may be approved from Shakespeare, where language is full of irregularities, that have since been eliminated from good style. Such were his use of the double negative, the nominative for objective in pronouns, plural subjects with singular verbs, double comparative and superlative, etc. The reason for this was the unfinished state of the language, a boiling pot of old English, Latin and French, whose contents have since been strained into a clear liquor.

The passage above quoted from Darwin was no doubt a slip of the pen on his part, as such use of *like* is condemned by all English grammarians and lexicographers.

Lowell only claims that the conjunctive use of *like* is colloquial, in common with hundreds of other provincialisms quoted in the preface

to the Biglow Papers. He never uses it in his own pure and refined style, or would have dreamed for a moment of approving it for good usage.

The language of a great people will rapidly increase in quantity. The English language has doubled its vocabulary within fifty years, increasing it from 100,000 to upwards of 200,000 words. But quality of expression, which means clearness and acuracy, should increase in equal ratio with quantity. A few simple rules, the fewer the better, should control the mass of speech.

It is true that the use of the people makes the laws of speech, but it should be good, not bad use, the use of the educated not of the uneducated, of science not of ignorance. It is the tendency of dialects to die out, as language unifies under the influence of education and the printing-press. Provincialisms are similar fossils that have no part in a pure and exact speech.

The Spelling Lesson.

H. L. LUNT, SUPERVISING PRIN. ONTARIO PUBLIC SCHOOLS.

Men formerly began their instruction with the abstract, with words whose content was unknown to the children, but by reason of the advance made in the science of education, we, to-day, begin our instruction by giving, first the idea, and then the corresponding word. Yet words, being only the signs of individual objects or ideas, do not, when standing alone and isolated, become objects of knowledge. Hence to the pupil a column of words as bald as the wave-washed pebbles, offers very little to hold his attention, stimulate his thought, or arouse his imagination. It is not surprising, then, that we often hear children complain that the spelling lesson is a "grind," and the hardest one they have to learn.

And is there no way to make this lesson as pleasurable and profitable to our pupils as we make other lessons? If we are to do so, a decided change must be made in the methods of teaching spelling which have heretofore obtained with the majority of teachers.

The teaching of spelling, as I believe, should be based upon the following considerations: First, as to the aim and content of the spelling lesson. Second, as to the number of words necessary for children to learn to spell. Third, as to the kind of words to learn. Fourth,

as to the arrangement of words in a series of lessons according to the ideas which they represent. Fifth, as to the immediate use of the words in original sentences.

The teacher's aim in conducting a spelling exercise should be to secure in pupils not only ability to spell words accurately, but also the power to use the words in well-constructed sentences. He should keep steadfastly in mind the end to be attained—namely, the enlarging of the pupil's vocabulary, and the intelligent using of words in oral and written expression. This will necessitate, of course, the daily and persistent use of a good dictionary.

The number of words necessary for a man to know in order to express his thoughts intelligently, either in speaking or writing, is comparatively small. A graduate of one of the great universities, rarely has a vocabulary of more than 3000 or 4000 words. He who wishes to read newspapers and well-written books understandingly, needs to know but about 2000 words. And an ordinary person can get along very comfortably with 500 words. This, of course, refers to the needs of conversation.

It is only in composition that our knowledge of spelling is chiefly used, and even then, there is usually a Webster's or Worcester's near at hand; and in reading, the mind is engaged only with the meanings and not with the mechanical construction of words. So we are led to inquire into the necessity of obliging pupils to learn the spelling of so many words, which they will probably never use in composition. In view of the fact that a large per cent. of children leave school before the age of 11 and a much larger per cent. at 12, should not care be taken in selecting such words for them to learn as will be essential and useful in carrying on the duties of life? What great good can possibly result in obliging children to load their memories with words grouped indiscriminately, and relating to classes of ideas which lie outside the sphere of their immediate thinking or future using?

For the purpose of utilizing to the best advantage, the efforts and energies of the child, the words of the spelling lesson should be grouped according to related ideas, and not according to the number of syllables in a word, nor with reference to long and short vowels, nor in a dozen other arbitrary ways. In all our spelling books there is usually the same hodge-podge of words as far as related ideas are concerned. No attempt has yet been made at the systematic grouping of words into vocabularies so as to form a series having a logical interdependence and content. For example, *couch* and *douche* will be found in

the same lesson, the one relating to the intellect and the other to inorganic matter; whereas *debenture* and *indenture* should properly stand in the same lesson, because they both relate to intersocial volition. Furthermore, the words should be so arranged in pairs that the correlative terms may be learned at the same time, since there are comparatively few words that have no correlative either of negation or of opposition.

To illustrate: In teaching the vocabulary of the personal affections arrange the words in parallel columns so that the correlative terms may be easily compared.

PERSONAL AFFECTIONS.

pleasure	pain
joy	grief
glee	care
cheer	woe
bliss	trial
happy	distress
gladness	suffer
delight	worry
comfort	trouble
rapture	sorrow
enjoyment	anguish
happiness	wretchedness
ecstacy	anxiety
complacency	tribulation
enchantment	affliction
amusement	desolation

It is to be remembered that a lesson in spelling is never mastered until the pupils can both *spell* and *use* every word which it contains. Only as words are *used* to express thought do they become living forces instead of dead forms.

Throughout the realm of nature whatever is unused becomes permanently weak and finally useless. He who would be physically strong, must use and train his muscles by proper and regular exercise. The using of present strength gives increased strength. In this respect the mental life is not unlike the physical. The mind cannot develop in power without using what it has acquired. So a student should not wait till he has acquired a full supply of knowledge along

one line before he begins to put his knowledge into practical use. He should begin to use *at once* the knowledge he has in hand, and so gain more in the using.

Reading for Young Children.

Horace E. Scudder, writing of a child's first reading books, in his paper in the September *Atlantic*, called The Primer and Literature, says:

In poetry the child finds his half-formed thoughts and imaginations fully expressed, and thus he is interpreted to himself. Once let genuine poetry possess a child, and the hardness of later life will not wholly efface its power; but let the cultivation of the love of poetry come late, and it comes hard.

We are undertaking to begin the child's training in literature when he is very young, very timid, incapable of long or high flights. If we put before him literature which bewilders him or presents great obstacles, we are driving, not leading him. In Mother Goose—meaning by this term nursery ditties in general, and ignoring the merely senseless jingle—we have a capital point of departure. To recall our favorite law, it helps the child to make a passage from the known to the unknown. The cat he knows, the boy he knows; but the cat in the well, little Johnny Green, big Johnny Stout, the bell with its swinging, resounding note,—all these are in the region of the just not known; and when he reads, half sings the ditty, his mind has been given wings with which to soar a little way. Again, Mother Goose is cheerful, and the task of reading literature is lightened. Further, Mother Goose is full of human associations, and, entering literature by this passage, the child is treading in steps worn by generations of use. There is no waste. He is becoming familiar with the permanent in literature; he is not conning that which will be left behind with childhood.

After Mother Goose, no one book can be relied upon; but it would not be impossible to make an anthology from the great literature small but precious, which should meet the needs of the child in the schoolroom. I would banish from his book all the trivial, prosaic, or supersentimental verses which are found in abundance in the primer, first and second readers. A child should never be taught to read these. If he picks them up in book or magazine at home, they will do him less harm; but they form no genuine part of his higher education, and

a wrong is done him when they are set before him even as exercises in drill. Let poetry be presented to him always as something fine and uncommon, then the power of poetry will grow in his nature. Blake, Tennyson, Wordsworth, Stevenson, Whittier, Longfellow,—these have all something not beyond the scope of the child that has had his introduction to poetry in reading Mother Goose; and solitary poems from other masters of English verse might be named.

In prose, the selection is at first more limited, because in literature prose presupposes an older audience. Yet the diligent gleaner need not be disheartened. He will find in proverbs and in pithy sayings much well-beaten gold. For more sustained forms the English Bible may be searched profitably. A very little practice in the more difficult words will make it possible, for example, for a child who has been reading a few weeks to read the Parable of the Sower. In the early stages, moreover, there should be offered what may be called the protoplasm of literature. Any one who has sought the origins of much modern literature has found them in folk lore and legends, and the comparative study of this popular literature discloses the variation in form. So then there is no absolute form which must be preserved, but each poet, or dramatist, or story-teller may use his art for a new setting of the images and fancies. There remains a task, for those who know the worth of simple, transparent English, in the casting of these legends and bits of folk-lore into form which shall be intelligigible to the child reading, and not merely to the child hearing. The matter itself appeals to the first wondering expression of the child's mind; and if the form be the simplest, most unadorned presentation, that accords with the spirit of the original conception. In after years, when the reader comes upon the same invention elaborated and adorned, flowering out in poem or drama, the early possession has not dulled, but rather quickened his interest; for now it is not the novelty, but the rich use of what is familiar, that impresses his mind.

What Can be Omitted in the Study of Geography.

A. E. FRYE, SAN BERNARDINO.

1. Book definitions of natural forms of land and water.

2. Heights of mountain peaks and ranges; lengths of rivers; names of unimportant peaks, ranges, rivers, capes, peninsulas, etc.

3. Answers to the countless text and map questions, which the teachers neither know nor care to know.

4. All details of relief that do not affect the *general* rainfall and drainage; and all details of coast lines which do not affect climate, or are of no commercial importance.

5. All systems of 'construction lines' which are not discovered (by the pupils) in the general directions of coast lines, or in the trend of highlands.

6. Lists of products,—export and import,—except those of *chief* commercial value.

7. Names of the hundreds of towns and cities which are not of commercial, capital, or historical importance.

8. Area of countries, states, and groups of states together with exact political boundaries of the same.

9. Population of cities and countries, and statistics of races, governments, and religious denominations.

10. All knowledge that is poured in merely for examinations, and which the pupil is not expected to remember after he leaves the school.

Do You Recognize This Picture?

"Please, Miss A., we didn't understand the grammar lesson last week; will you go over it again?"

"Oh, never mind; *we must get through this piece.*"

This answer was really given in a school of good standing, and it is to be feared that the kind of teaching it implies is not at all uncommon. In the cases where teachers are honestly trying to find out the real needs of their pupils and to supply them, difficulties still remain in the way of natural temperament, and these are not perhaps sufficiently considered in organizing classes in schools. Cases sometimes arise where children are permanently injured by being allowed to remain under teachers who, however well-meaning, are unable to supply their special intellectual needs—who praise when they should be silent, bring into prominence when they should ignore, discourage by blame or punishment some really healthy tendency—who, in short, are incapable of seeing what the child really requires.—Ex.

Education and the Acquisition of Knowledge.

[Extracts from an article by R. L. Douglass, St. Johns, Cal,]

Probably fifty per cent. of our teachers have a wrong conception of Education. Until I gave the subject some thought, I imagined that an education consisted of *knowing* a certain number of facts about a certain number of subjects called studies. The more facts that could be stated about each subject, the better the education of the man This is entirely wrong. * * *

Knowledge is the *one* thing that we *cannot* give to our pupils. I once tried, for seven months to give a class a knowledge of *percentage*, but finally discovered that I had undertaken an impossibility. I now *know* that education is not *putting something into the child*, but simply developing what is *already* there.

Knowledge is a clear and concise conception of truth and fact. There is but one channel by which knowledge enters the mind of the child, viz.: A proper presentation of the fact to each of the mind's faculties in their natural order. If these faculties have been trained to accuracy and dispatch, the child will acquire and retain a true and complete conception of the facts presented. If not, the teacher may blindly work forever and accomplish nothing. * * *

I want to outline a text book for use in our school rooms. I believe that my conclusions are correct. I want to utilize time. I want less confusion in the minds of my pupils. I want less confusion in my *own* mind. I want *fewer* texts.

I believe that a separation of the great universe of truth is more beneficial to the pupil than the putting of each fact together to form the whole. If the pupil studies the whole, his mind will eventually discover the parts. A novice cannot put the wheels of a watch together, but he can easily take them apart. Either process shows to his mind the principle of the watch. Does not reason tell us to use the easiest process ?

Let us *teach* our pupils, but let *them* do the *learning*. Present but *one* text to the pupil's mind and let that be *all knowledge under an appropriate name.* After a time he might know that there are several branches of that text, viz.:

The knowledge of Self—Anatomy, Physiology, Music, Calisthenics, Gymnastics, etc.

The knowledge of Earth—Geography, Geology, etc.

The knowledge of Things—Laws, Events, Substances, etc.

The knowledge of People—History and Biography.

The knowledge of Doing—This includes the mechanical arts.

The knowledge of Language—The literature of the world.

The knowledge of Ethics—The Laws of Justice.

The knowledge of Numbers or Mathematics, pure and mixed.

Here is the outline for a text book that will better enable the pupil to grasp that knowledge which is most beneficial.

Teach our present texts:

History, Geography, Grammar, Reading and Spelling, as *one*. I would reverse the present method of presenting History and use a true and correct method. One that will appeal to the mental powers in their natural order.

Lead the pupil's mind from the bright and clearly defined present into the dim past. I would not use dates as mile posts but I would use the *facts* themselves.

I would have the history of the farm, neighborhood, county, State, Nation and World, in succession. At the same time I would have the Geography of each. I would have, with each lesson, in the same book, Literature suited to the facts presented and also a language and spelling drill.

The history of the farm is unimportant but it is the natural stepping stone to important knowledge, and long ere we are *aware*, the pupil will have grasped the grand meaning of the text, *Knowledge*. He will make a natural classification of this knowledge, and will have a maturity of thought, unequaled by that of the pupil trained under our present educational system.

LITARARY YOUNG MAN—"Miss Jones, have you seen 'Crabb's Tales?'"

Young lady (scornfully)--"I was not aware that crabs had tales."

Literary young man (covered with confusion)—"I beg your pardon, I should have said read 'Crabbe's Tales.'"

Young lady (angrily scornful)—"And I was not aware that red crabs had tails, either."

Exit young man.

Why are the new postage stamps like unto an unruly school boy?

ANS.—Because they require too much "licking."—SCHOOL BOY, *Sunol, Cal.*

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

Boards of Education vs. Teacher's Certificates.

W. B. Smith, of the Glenn County Board of Education, referring to President Hugh J. Baldwin's remarks on the above subject, states that the Glenn County Board has passed a resolution favoring a system of reciprocity in regard to granting certificates on those granted by other counties. He says:

"I hope that the day will soon come when "Reciprocity" in this line will supersede the antiquated system of "Protective Tarift" as mentioned by President Baldwin.

Why is it, fellow-teachers and members of Boards of Education, that a certificate issued in one county is not as good as one granted in the adjoining county? Is there some peculiar property in the imaginary line that separates the counties, which causes the children in one to be more difficult to teach than those in the other? If there is it is strange that this difference has not been discovered by those of us who have taught in more than one county.

What would we think of a rule that would permit a lawyer or a physician to practice in one county only, until he had passed an examination in each? Yet we, who have it almost altogether in our power to correct this wrong, and who should be models of courtesy, and among whom the greatest good-will and fellow-feeling should prevail, we will persist, in many instances, in humiliating our fellow-teachers, when, in so doing, we not infrequently, are humiliating our betters so far as teaching is concerned. Let us all, then, pull together, and, by bringing an influence on our County Boards that they cannot resist, do away forever with this vicious and humiliating system.

From the Columbian Exposition.

The following letter from Prof. Allen is of general interest at this time:

P. M. FISHER, CHICAGO, ILL.
Chairman Educational Com.

MY DEAR SIR: The hurry and confusion attendant upon getting ready to come on here at the time the State Commissioners required us to start, left no time for me to do, what was both an inclination and a duty—make a report to the committee, through you, of what had been accomplished through their agency. Nor can I now make the full report that ought to be made, as the condition of the California Building is such that I have dared to open nothing. The material came in so rapidly and the time was so short that many of the packages left the State unopened. And but few superintendents, in their letters of transmissal (if they sent such letters) gave a full inventory of their exhibits. I will, however, do the best I can to date.

We have *something* from about forty county and cities. The Relief Map and the Educational Chart, that in themselves would have made a good showing, and that I hoped would come from every county, are lacking from at least twenty. From some I received replies, but from too many not a response. Circulars were sent, and in many cases personal letters were written, but nothing that I could do would waken them from the apathy that seemed to prevail. I cannot but think that these counties will greatly regret this, and to me it seems entirely inexcusable.

There was, perhaps, an excuse for not preparing much written school work. Our previous State exhibits have not tended to make our teachers very confident that such exhibits are always honestly prepared, and when not, they are worse than useless. But that the statistical idformation was not forthcoming, and a map of some kind, upon which could be shown something of the extent of our educational system, is a different matter.

Besides the large State chart, I had charts printed for thirty-five counties and cities. At considerable expense, I had four of these prepared of each, and have sent two back to the superintendents for their use. I think they will be highly prized. I had a miniature American flag engraved, to show the location of school houses, and these, too, were sent to all counties that have forwarded maps for use upon the map retained.

Our location in the State building is all that could be desired, and I think we have space enough to show well what we have. There is considerable material yet to come forward; for notwithstanding we had, in many ways, fixed the date of shipment, and the car was held nearly ten days beyond this time, all were not ready. Whatever is here before June 1st I shall put in place.

The kindergarten section will, I think, be well represented. There will also be a good exhibit of intermediate and grammar school work, but of advanced schools little or nothing. Coggswell Polytechnic School has a fine exhibit, and we have a small exhibit of industrial work from the normal school at San Jose.

I can but regret that our exhibit will be so meagre, but I have seen no way to make it more or better. I hope to get everything in place by May 1, but that will depend entirely upon the progress in the building, much of which is not yet tiled. With the two assistants appointed by the Commission, I can put the work in place very rapidly, when I feel safe to open it and begin.

Should any of our County Boards desire to communicate with us, letters should be directed to the California Building, Jackson Park, Chicago, Ill.

I am, very respectfully, yours,

CHAS. H. ALLEN,
Supt. of Exhibit.

How to Train Teachers.

At the latest meeting of the Department of Superintendence of the National Educational Association, Superintendent Thomas M. Balliet, of Springfield, Mass., spoke of the training of teachers. He said in part:

"Schools cannot be reformed by dismissing inefficient teachers. In cities where there are many inefficient teachers salaries are low, and it would be impossible to replace poor teachers by good ones at such salaries. In such cities schools are always mixed up with politics. Such a community would not sustain a policy which would weed out the poor teachers. Ward politicians are, however, not the only obstructionists. Ministers of the gospel not unfreqnently allow their sympathies for a poor teacher to run away with their judgment and embarass conscientious work on the part of a school committee.

"Teachers ought to be trained, and in two ways. Every city of considerable size ought to have a city normal school, with a special class for experienced teachers. Inefficient teachers, for whom there seems to be still some hope, ought to be obliged to discontinue teaching for a year, enter this class and be "made over." If their work in the normal school does not promise success in the future they ought to be entirely dismissed.

"In the second place, the character of school supervision must be changed. Expert supervision in this sense will be the supervision of the future. The superintendent's energy ought to be expended in teaching pedagogics. He ought to throw his main strength into the teachers' meeting. He ought to give as systematic instruction as is given in the best normal schools and colleges. If he is not competent to do this, it is difficult to see why he should hold his position.

"In the large cities, the superintendents must have a large corps of assistants. The city must be divided into districts, and meetings of teachers in groups of not more than 200 be held. The superintendent ought to lecture, at these sectional meetings, to all the teachers of a large city at least once in two months, if not oftener.

"Besides this, he must spend a large part of his time in visiting the schools to make himself thoroughly familiar with the defects of the teaching and the weak points in the management.

"In the past, supervision has busied itself too much with petty criticisms, petty suggestions in regard to petty details. School supervision in the future will aim at opening up to teachers broad lines of educational thought, giving them inspiration and stimulus to put their brains into their work and training them to work out the details of methods of teaching in the light of general principles. It is the business of the superintendent to create an educational atmosphere in the city, arouse enthusiasm among his teachers in their works and direct public sentiment, in regard to education, into right channels."

Non-Progressive and Retrogressive Teachers.

At the above-mentioned meeting, Supt. J. M. Greenwood, of Kansas

City, Mo., answered the question: "What Shall be Done with Non-Progressive and Retrogressive Teachers?"

"Habits of mind and mind activity, whether of children or adults, engendered by routine work, requiring little or no mental effort, produce mind atrophy. The teacher who goes over the same class work year after year contracts mental habits that dwarf, cramp, and deaden intellectual activity by focusing it on small bits of the subjects taught. To concentrate the attention is a narrowing process not only in regard to the scope of the subject-matter, but through the channels along which the thought lines run.

"Change is the law that prolongs life. The same law holds true concerning the nerve and brain forces. It is not the work in the school-room as such that produces "mind cramp" in the teacher, but the concentration of attention to a very restricted limit in one single line direction. In lesson hearing and lesson thinking, the brain channels are worn deeper and deeper by constant attention. To utilize as much of the brain surface as is possible and to set as many different counter currents into active operation, appear to be the only rational solution of this question. When the brain channels, or gullies, are so deeply carved out and the walls are case-hardened, so to speak, counter currents of thought at work on the brain itself are about as effective as sheet lightning is in a cloud that has past—a mere light flashing on the surface and nothing more. When one has passed into this stage of intellectual fossilization, nothing short of volcanic or dynamic action will produce any appreciable effect, and then perhaps only a temporary flicker.

"The first kind of help is that of ascertaining information as to the teacher's knowledge of the branches taught. This information is best ascertained at recess, noon, or in conversation at the superintendent's office. Such conversations should be brought about in an informal way, and ought to be conducted as a free interchange of ideas, touching the subjects under consideration. The idea that is here uppermost in any mind, is to have each teacher always forging ahead, adding new capital, as it were, to the ready cash capital on hand. New work of some kind for every teacher is absolutely necessary.

Nebulous Views of Applicants for Certificates.

[The following, furnished by a County Superintendent, is from real life.—ED.]

Abeyance—Restriction; a bow; a two-wheeled carriage; abstinence; an act of reverence; vigilance.

Anglicize—To make into angles; to entrap.

Anomaly—A coincidence; namely; something not clear; mixed; a signature.

Antipodes—Emigrants; divisions; the South Pole; a kind of insect.

Apothegm—That which follows; pertaining to drugs; a proposition in algebra; a drug; circumference; a bounding line.

Auriferous—Bearing sound; ear-shaped; sound producing; large; pertaing to the ear; a hard opening.
Avaricious—Wild; untamable; quick.
Barnacle—A pirate; a furnace.
Carnivorous—Relating to carcasses.
Decalogue—Talk among ten persons; a period of time; a style of poetry.
Demonetize—To warn; to point out; to assign or number; to become like a demon.
Esthetic—Sour, like vinegar.
Extradition—That which bars out; to set free; that which is extracted; the act of setting free; that which is handed down from above; freedom; not authentic; to banish.
Facetious—Easy; misleading; false; easily bent; fickle; changeable; thorough.
Germicide—A murderer of insects; to murder one's child; a crime; a murderer; one who murders a woman.
Inalienable—Not according to the constitution, that cannot become an alien; unfriendly.
Inquisition—An acquirement; to take advantage of.
Omnivorous—Overshadowing; state of being wholly true; all-powerful; large.
Ornate—Original; born in; a kind of stone; excessive; great.
Panegyric—A picture.
Perfidy—Theft; belief; truthfulness; trifling.
Prorogue—A rogue beforehand; to accuse; to call to witness.
Sophistry—Belonging to witchcraft.
Synthesis—Analysis.
Undulation—An unfolding; taking out the earth underneath.
Verbose—Not talkative; spoken.
Vitiate—To put new life into; (2) to enliven; to make weak; to make vital; to emplant life and vigor.

County Institutes.

Only meagre reports have been received from the Institutes held in April and the first week of May. From what has reached the JOURNAL we make the following notes:

LOS ANGELES, April 3-7—Regular Instructors Elmer E. Brown, Ber-

keley; C. H. McGrew, San Jose; Miss R. Anna Morris, San Francisco. J. H. Strine, President of the County Board of Education, delivered the opening address. Dr. David S. Jordan gave an evening address on "The Value of Higher Education." Principal Ira L. More, of the State Normal School, spoke on "The Professional Duties of a Teacher." The scope of the work and variety of ability engaged are indicated in the following somewhat familiar selections from the large list: C. H. Keyes, C. G. Baldwin, Charles E. Hutton, J. D. Graham, Juliet P. Rice, Chas. L. Ennis, LeRoy D. Brown, F. A. Molyneaux, James N. Pemberton, A. L. Hamilton, Josephine E. Seaman, P. W. Kauffman, Mary F. Hull, Libbie Mosher, Minnie M. Perley, Belle Duncan, Hannah Yonker, Charlotte Knoch, Chas. T. Meridith, Mattie A. Reed, Caspar Hodson.

The mornings were spent in section work, each section in the primary grades covering two years as laid down in the course of study. The Grammar grade and High school teachers were grouped together. "The Study of Systematic Pedagogy, "History of Education," "How Knowledge Becomes Power," "The Place of the Story in Education," gives a strong hint as to the character of the more strictly professional instruction given. This is one of the large, strong County Institutes of the State, and its programs would do credit to a State Association. Superintendent Seaman has no lack of ability at his command in his corps of teachers. The general supervision is done by himself, with consummate tact.

NEVADA COUNTY—The Institute met in the new High School Building, Grass Valley, April 17-26. Conductor, P. M. Fisher. Instructors, State Superintendent J. W. Anderson and Prof. George Kleeberger, of the San Jose Normal School, and a number of resident teachers, prominent among whom were Messrs. Stokes, Hussey, O'Neill, Fletcher, Baugh, and Misses Morton, Doom, Macauley.

Addresses were delivered at the evening sessions by P. M. Fisher and Professor Kleeberger. The Grass Valley teachers gave a delightful reception the second evening. Hamilton Wallace, Principal of the High School, presided at the reception, and delivered an address of welcome, remarkable for its felicity of expression. In his opening remarks Superintendent Rogers, using the article on Normal School requirements as published in the April JOURNAL as his text, called the attention of the teachers to the importance of instruction that would give the pupil mental grasp and confidence. This same article and

the sets of examination questions it contained, furnished material for a very animated discussion, the chief point in controversy being the alleged unfairness of the examination on decimals. It was finally agreed that the conjunction *and* should be uniformly used to indicate the place of the decimal point, and should not be used at all in dictating whole numbers; and, furthermore, that teachers should exercise great care in teaching the importance of distinct articulation and clear expression in reading from the arithmetic as well as in the regular recitations from a reader. Prof. Kleeberger's talks on Geography, Arithmetic, and the Essentials of a Course of Study, gave the teachers much food for reflection and furnished a stimulus that cannot fail to be of benefit. Superintendent Anderson gave a clear exposition of the important educational enactments of the Legislature of '93. The Institute was remarkable for the interest manifested by the general public. The large hall could not accommodate the numbers that attended the afternoon sessions. Hundreds were turned away from the evening sessions. The press was interested, and gave full and appreciative notices. The teachers of Truckee were so impressed with the value to a community of the sessions of an Institute that they went quietly and energetically to work, and as a result the teachers voted to meet in Truckee next year.

YUBA, Marysville, April 24-26—Will S. Monroe, Conductor and Instructor. A very pleasant session is reported. Herbert Miller, Principal of the High School, successor to R. F. Pennell, proved a valuable aid to Superintendent Folsom. We have received no copy of the program.

LAKE, Lakeport, April 24-28—Instructors, Professor Childs the first two days; Superintendent Anderson and P. M. Fisher the last two days. Evening addresses were delivered by Professor Childs on "The Atmosphere," and by Mr. Fisher on "The Power of an Idea."

Every teacher in the county was present save one, and she sent a medical certificate of inability to attend.

Interest was unflagging throughout. The citizens of Lakeport maintained their reputation by furnishing large audiences. Individuals manifested their hospitality by generous provision in the way of yachting excursions, and a drive and dinner to that well-known and delightful resort, Highland Springs.

Superintendent Harrington is to be congratulated upon the unmistakable evidences of improvement among her teachers. Her teach-

ers are to be felicitated because of the pervasive influence of a sympathetic, progressive Superintendent. The watch-word of the Institute was, "Better Equipment of the Teacher."

SONOMA, Santa Rosa, May 1-5—Instructors, W. S. Monroe, "Sonoma County Teachers' Library Reading and Language;" A. G. Warner, Palo Alto, "Political Economy;" Elmer E. Brown, "Knowledge and Power," "The True End of Public School Education," "The Heart of the Course of Study;" Gertrude H. Mason and F. L. Burk, "Literature;" Dr. T. D. Wood, "School Hygiene;" P. M. Fisher, "Practical Talks;" David Starr Jordan, "Agassiz, and The Value of Higher Education;" Chas Mills Gayley, "Literary Sources;" Margaret E. Shallenberger, "Drawing," "Clay Modeling," "Language," "Ideals;" C. C. Swafford, "Artificialism." The Institutes have done much for the Sonoma County teachers. They are well informed, alert and critical. Quite a number of them are now engaged in collecting data, under the supervision of Professors Brown and Barnes; a leaven is at work among the entire body that is apparent in a spirit of inquiry. Not a little of this is due to Mrs. Martin, Superintendent, whose vigorous administration excites admiration and wins respect.

Important Supreme Court Decisions.

BOARDS OF SUPERVISORS MUST LEVY SCHOOL TAXES IN CITIES UPON ESTIMATE OF CITY BOARD OF EDUCATION.

Decision of Supreme Court (March 2, 1892):—The board of education of the city of San Diego presented an estimate to the board of supervisors of the county of San Diego of the amount of money needed to be raised by taxation for school purposes of the school district of the city of San Diego, and requested said board of supervisors to levy a tax upon all the taxable property in the city sufficient to raise the amount of said estimate. Thereafter the board of supervisors notified the board of education in writing that it would not levy such tax, whereupon the plaintiff herein brought this action to compel its levy. Upon the hearing the Court rendered its judgment September 26, 1892, directing the supervisors that at the time of levying the county tax of the county, they levy a tax upon all the taxable property in said San Diego school district, sufficient to raise the amount required by said school district for school purposes during the year next ensuing after the first Monday in January, 1893. Upon the service of this judgment upon the board of supervisors they on the same day complied therewith and levied the tax, as directed by the mandate of the Court. On the 6th of October, 1892, the board of supervisors took an appeal to this Court from the judgment that had been entered against them, and the respondent now moves to dismiss the ap-

peal upon the ground that the judgment was satisfied before the appeal was taken by a compliance therewith, and a levy of the tax directed by the judgment.

We are of the opinion that the motion must be granted. The defendant voluntarily complied with the mandate of the Court, and the judgment was thereupon satisfied and its force exhausted. After it had thus been satisfied, there was nothing in the judgment which the Court had rendered, of which the defendant could complain, or about which it could say that it was aggrieved. A reversal of the judgment would not of itself set aside the levy of the tax which had been made, nor did the appellant by its compliance with the judgment lose any property or rights of which restitution could be made in case of a reversal. C. C. P. § 957. The proceeding was for the purpose of compelling the defendant to perform an official duty, and not one in which it had any personal rights to be affected. By reason of its levy of the tax in obedience to the judgment, rights and interests of other parties have supervened, and it would be unjust to those who have acquired or lost such rights by reason of its compliance with the judgment, if the appellant should now be permitted to seek a reversal of the judgment under which, by reason of its own acts, those rights and interests have been acquired.

The appeal is dismissed. HARRISON, J.

We concur: PATTERSON, J.; GAROUTTE, J.

[In view of this decision an attempt is being made to invalidate the school bonds recently issued in the City of Oakland.—ED.]

THE COUNTY TREASURER IS THE CUSTODIAN OF SCHOOL FUNDS APPORTIONED BY THE COUNTY SUPERINTENDENT OF SCHOOLS TO CITIES WITHIN THE COUNTY.

From Decision of Supreme Court, March 2, 1892:

* * * * * * * * * *

The plaintiff herein is the city treasurer of the city of San Diego, and alleges that certain moneys in the custody of the county treasurer have been apportioned by the County Superintendent of schools to the school district of the city of San Diego, a portion of which were derived from the public school fund and a portion from a tax upon the taxable property of the city of San Diego levied by the Board of Supervisors, in pursuance of an estimate made by the city Board of Education; and he seeks by this proceeding to compel the defendants as auditor and treasurer of the county of San Diego to deposit these moneys with him as the treasurer of the city of San Diego.

* * * * * * * * * *

Section 1,617 makes it the duty of the Board of Education in cities to pay all moneys collected by them from any source whatever for school purposes into the county treasury. As these boards do not collect the money which the Superintendent apportions to the district, this provision must have reference to other moneys, but as it requires them to pay all moneys collected from any source into the county treasury, it is corroborative of the proposition that as a school district the city is not an independent organization, but is correlated to the other school districts in the county, as a part of the system of public schools provided for by the legislature.

* * * * * * * * * *

A Board of Education within a city has only the same right to make a requisition upon the Board of Supervisors to levy a tax for school purposes upon the taxable property within the city, that has the Board of Trustees within any other school district in the county.

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The provision in the charter of the city of San Diego that all moneys belonging to the school fund of the city shall be deposited with the city treasurer, cannot supersede the requirements of the Political Code that all moneys pertaining to the public school system shall be paid into the county treasury. Aside from the fact that this provision in the charter purports in terms to apply only to the taxes levied by the common council, and not to those levied by the Board of Supervisors, a consideration of the functions of the city government relative to the county government will show that the provisions of the charter cannot have the effect contended for by the appellant. The Constitution has authorized the city to frame this charter "for its own government," and this limitation implies that its authority is restricted to its own officers and the inhabitants within its territory, and that it cannot extend the authority of its officers to matters outside of its territory, or to subjects that have been placed by the Constitution exclusively within the control of the legislature, or that have been confided by the legislature to the management of other officials. The county treasurer and the county auditor are elected by the county at large, and constitute a portion of the political government of the State, with duties and powers prescribed by the legislature, and in their official positions act for the welfare of the State; but if it should be held that the inhabitants of a city can by means of a charter framed by themselves prescribe the powers and duties of these officers, the charter of that city would cease to be a charter "for its own government," and we might have the spectacle of different cities within the same county prescribing different and perhaps contradictory duties for officers who had not been chosen by them, but had been elected by different constituencies under the general law of the State, and who were accountable for their acts to the citizens by whom they had been elected.

We hold, therefore, that the appellant is not entitled to the custody of the moneys referred to in his petition, and the judgment of the superior court is affirmed. HARRISON, J.

We concur:

PATTERSON, J.,
GAROUTTE, J.

COUNTY TREASURERS MUST HONOR WARRANTS FOR SALARIES OF CITY SUPERINTENDENTS OF SCHOOLS.

In the matter of an injunction to restrain County Treasurer from paying warrant for salary of City Superintendent of Schools (San Diego) we quote from the Supreme Court Decision (March 2, 1892):

"In Kennedy vs. Miller et al., No. 19,032, we have held that the city of San Diego is a corporation distinct from the corporation known as the school district of the city of San Diego, *and that the rights and obligations of the school distrid*

corporation are to be determined by the provisions of the Political Code, and not by those of the charter of the city of San Diego, and also that the powers and duties of boards of education in cities are the same as those of boards of trustees in other school districts. We also held in that case that all the moneys which are apportioned from the school fund, as well as those which are raised by means of a tax for school purposes levied by the board of supervisors, are to be paid into the county treasury, and to remain there until they are paid out upon a warrant drawn by the county auditor, under a requisition from the county superintendent of schools.

Section 1793 of the Political Code, as amended in 1891, Stat. 1891, p. 164, authorizes the board of education of a city to elect a city superintendent of schools, and also to fix the salary of its employees. Assuming, therefore, that the superintendent of schools of the city of San Diego is an employee of the board of education of that city, whose functions pertain to the management of the public schools organized within the school district of the city of San Diego under the system established by the legislature, the fixing of his salary would pertain to the board of education, and not to the common council, and such salary would be payable out of the moneys held in the county treasury for the account of the school district of the city of San Diego. These moneys are in the treasury to the credit of the school district, and the city of San Diego as a municipal corporation has no interest therein. It therefore appeared upon the face of the complaint that the plaintiff was not entitled to the injunction sought for, and the order dissolving the same is affirmed. HARRISON, J."

"We concur: PATTERSON, J.; GAROUTTE, J."

NORMAL SCHOOLS AND UNIVERSITIES.

On Tuesday, April 11th, the joint session of the three Normal School Boards was held in the Normal School Building, San Jose. There was a full attendance.

Brief reports were received from the three Principals of the Normal Schools. In the discussion of these reports Trustee Molyneaux, of Pomona, stated that in his experience as Superintendent of the Pomona schools he had found that graduates of High schools did better work as teachers than did graduates of Normal schools. This statement did not agree with the observation of Professor Childs, who made a spirited reply. A committee was appointed to report at the the next annual meeting upon the advisability of extending the course to four years.

In the evening the local faculty tendered a reception to the mem-

bers of the Joint Board. A very pleasant feature of the occasion was the presentation by a committee of the senior class of handsome bouquets to State Superintendent Anderson, to Hon J. C. Sims, of Santa Rosa, Hon. A. G. Bennett, of Santa Clara, and to P. M. Fisher, of the JOURNAL, for their efforts at the last session of the legislature. Each gentleman made an appropriate response.

During the day the Los Angeles Board held a separate meeting, and, having reluctantly accepted the resignation of Principal Ira More, E. T. Pierce, Principal of the Chico Normal, was unanimously elected to the vacancy.

Leland Stanford Jr. University.

The Register of the Leland Stanford Jr. University, which has just appeared, contains 144 pages, and is considerably larger than the Register for last year. The whole number of students registered for the present year is 764, an increase of 205 over the preceding year. The distribution of students is interesting. Of the whole number 467 are from California, and 134 from States east of the Mississippi. It is interesting to note that of the increase about 50 per cent. comes from States outside of California, and the contingent of Eastern students is likely to increase at an even more rapid rate in the future.

The distribution of students among major subjects is also interesting. English leads the list with 178; Mechanical Engineering has the next largest number, 98; History, 68; Civil Engineering, 63; Physiology, 51; Latin, 40; Economics, 37; Mathematics, 34; Chemistry, 30; Romance Languages, 21; German, 20; Education, 20; Zoölogy, 17; Drawing, 15. The number of major students in a subject, however, does not fairly show the work in the different departments; thus in English, with only 178 major students, 446 students are taking work in that department, and the total registration in all English classes is 739. Thirty-two students are taking Greek; 60, Latin; 257, German; 255, Romance Languages; 70, Psychology; 41, Education; 271, History; 86, Economics; 265, Mathematics; 94, Physics; 79, Chemistry; 345, Physical Training; 108, Drawing.

The number of graduate students is 66; of whom 51 are properly graduate students in the sense of doing graduate work. This is an increase over last year of 29. Considering that theere are no fellowships or scholarships, this is an exceedingly good showing.

The teaching force of the University is classified as follows: Pro-

fessors, 33; Associate Professors, 7; Assistant Professors, 14; Instructors, 15; Assistants, 8; Non-Resident Lecturer, 1; or a total of 78. There are in addition 10 other officers, connected mainly with administration.

The Library now shows a total of 15,000 volumes and 4,000 pamphlets, or an increase of 7,000 volumes and 1,000 pamphlets since the appearance of the last Register in June, 1892.

Several important additions in the "Departments and Courses of Instruction" are noteworthy.

In Greek an additional instructor and several new courses have been added.

In Latin, the work required in entrance, subject 24, will also be offered in the University, thus providing for a large class, who offer only subjects 22-23 at entrance, but who wish to go on with Latin in the University.

A new Department of Archæology has been added. This will be in charge of Associate Professor Miller, and the work of the Department will center around Mrs. Stanford's collections of ancient art, which will be placed in the Museum during the summer.

In English the courses do not differ materially from those offered last year. English 1, the elementary course in English composition, drops out, the work in that course being now practically required for entrance. Additional courses in the art of writing have been added.

The Department of Ethics is entirely new. Nine courses will be offered by Professor Griggs, covering a considerable variety of work, including "An Introduction to the Study of Ethics," "Spiritual Teachers' of the Nineteenth Century," "Ethical Literature of the Bible," "The Evolution of Ethical Conduct, and Ethical Ideas," "Seminary in Study of Ethics," and "Ethical Problems."

In History an Assistant Professor has been added, and several new courses are announced.

In the new Register appears the first complete announcement of the Department of Economics and Social Science. Nineteen courses are offered, arranged in three divisions: (1) Political Economy, Statistics and Finance; (2) Sociology; and (3) Political Science. The first includes the elements of Political Economy, economic reforms of to-day, development of industrial society, corporate industry, public finance, history of socialism, railroad problems, and the theory and technique of statistics. In Sociology courses are offered in Anthropology and Ethnology, in Statistics and Dynamic Sociology, in Social

Pathology, and in Charities and Corrections. Under Political Science the topics are The Systems and Methods of Legislating, and Administration in American States, Counties and Cities. These courses are supplemented by seminaries.

The announcement of the Law Department is entirely new. In this department appear ex-President Harrison and Professor Abbott, late of the Northwestern University. The Department of Law is perhaps the most interesting innovation which the new University has inaugurated. In no law school in the country are the requirements for admission the equivalent of the requirements to admission to regular university work. In most law schools they fall very far below. The customary law school course is a two years' course, devoted almost exclusively to legal subjects. In the Leland Stanford Jr. University no effort will be made to attract the conventional law student. The Department of Law will not be a professional school, but will be a regular University Department. The same entrance requirements will be necessary as in any other department, and the same requirements for graduation will hold. In other words, students must offer ten subjects for admission to full standing, and 120 hours for graduation. A student making law his major, therefore, will necessarily supplement the work in Law by a large amount of work in English, History and, Economics and Social Science. The degreee will not be the conventional "Bachellor of Laws," but "Batchelor of Arts in Law." Only elementary courses are offered for the first year. These include Elementary Law, Contracts, Torts, Constitutional and International Law, and a Seminary. The outside public will perhaps be most interested in the lectures on Constitutional and International Law, which will be begun in October by non-resident Professor Harrison.

Astronomy has been dissociated from Mathematics, and appears as a separate Department. It is announced that graduates and special students of the University will be received at the Lick Observatory on the same terms as graduates and special students of the University of California. Residence at the Lick Observatory will count as residence at the University.

In Physics additional courses are announced in Electricity and Magnetism.

In Chemistry additional courses are announced, and a special course in chemical engineering, leading to the professional degree of hemical Engineer is outlined.

In Botany the new Department of Systematic Botany is introduced. This is in charge of Professor Dudley, late of Cornell University.

In Entomology the force has been strengthened by the addition of Assistant Professor Kellogg, and the work will now run through the entire year.

In the course in Drawing and Painting additional advanced work is offered for the coming year.

The new Department of Electrical Engineering is announced. This will be in charge of F. A. C. Berrine, a graduate of Princeton, and late of Boston. The courses for next year are not yet announced.

The only important change in the requirements for admission is in English. Hereafter more stress will be laid upon the composition work, and for the present no certificates will be accepted in place of the entrance examinations in this subject. The next entrance examinations will be held May 25th, 26th and 27th. The Register will be sento any one on application to the Registrar, Palo Alto, Cal.

EDITORIAL.

Edw. T. Pierce.

We cheerfully accord the place of honor in this number of the JOURNAL to the gentleman whose portrait appears as frontispiece.

Mr. Pierce was born in Meredith, Delaware county, New York, in 1851, being the eldest of ten boys. He taught his first school at 17, receiving $20 a month and "boarding around." Graduated from the State Normal School at Albany, New York, in 1872, in the same class with Judge Van R. Patterson of the Supreme Bench of this State. Graduated from Union University in 1877 with the degree of L. L. B. Was Principal of a large school near New York from '77 to '81, coming to California in the last-named year on account of his health. He taught for eight years in Los Angeles county. He organized and conducted the schools of Pasadena during their critical formative period. All the fine schoolhouses of that beautiful city were built during his administration. While in this work he received a unanimous call to Chico in 1889, as the first Principal of the State Normal School there.

The building was still unfinished, and again his ability for organization and supervision was put to the test. The firm establishment of this school, its strong corps of instructors, its growing efficiency and popularity show how he stood the test. When Prof. Ira More, Principal of the Los Angeles Normal School, tendered his resignation a year ago to take effect in July, '93, much speculation was indulged in as to who would be chosen his successor. At a meeting in April the question was settled by a unanimous call on the first ballot to Mr. Pierce. This call has been accepted, and Mr. Pierce will return to the scene of his first labors in the State, and to the steadfast friends who have followed his career with confidence, and who will welcome him with a cordiality that inspires success. Chico will miss his firm grasp. But it can better afford to lose him now than at any time during the past four years. He has placed the school upon a sound foundation, and another can be found who will advance it along the lines indicated. The call to Los Angeles comes at a time singularly adapted to Mr. Pierce's experience. Under the wise administration of Principal More the school itself is in an excellent condition. Its graduates are found doing good work in every section of Southern California. It has the confidence of the public. Its corps of instructors is strong and animated by a single purpose. But more room is needed. The Legislature has appropriated $75,000 for a building that shall furnish additional class rooms and rooms for the Training Department. In the planning and supervision of this expenditure Mr. Pierce will find an opportunity for the exercise of his special aptitude.

Judging from the past, Mr. Pierce will, in the administration of his new trust, be conservative yet progressive. He is not a radical. His faculty is essentially constructive. He knows how to adapt means to ends. He can define a policy and adhere consistently to it. His unanimous election demonstrates that he has the confidence of his Board of Trustees. The loyal coöperation of his Faculty should follow. His large number of friends in all parts of the State believe he will meet with continued success, for the field is promising and the laborer has been tried.

U. S. Commissioners of Education.

Not since the creation of this office and the first appointment tendered to that veteran and self-sacrificing educator, Dr. Henry Bar-

nard, has there been a more general expression of pleasure than when Dr. Wm. T. Harris was appointed by President Harrison to stand at the head of the educational forces of the Nation. A better appointment could not have been made. Dr. Harris is a scholar, and at once commanded the respect of all the higher institutions of learning. As a school superintendent, his St. Louis record is almost without a parallel, and his grasp of public school affairs assured him at once the coöperation of all connected with them. As a thinker and an educator and a philosopher, he is quite as well and favorably known abroad as at home.

With all these elements of strength, the American schoolmen had much to expect from him in his national capacity. But his leadership has more than justified expectations. He has proved to all who have followed his work, that as an educational expert, he stands well at the head of our list. His familiarity with international problems and institutions, as evidenced by his annual report, indicates forcefully his range of interests and activities.

President Cleveland will soon be called upon to name his successor. Who will it be? Who other should it be than Dr. Wm. T. Harris? The friends of education throughout the country desire and expect that he will be reappointed; and it does not seem at all likely that the President will disregard their wishes.

Superintendent Anderson has appointed Prof. Fernando Sanford, of Palo Alto, to the Educational Council, vice Prof. Earl Barnes, resigned. While the choice is a good one the occasion for a change is to be regretted. Prof. Barnes has just the temperament needed in members of this body. He is an ardent lover of truth. He has a keen appetite for facts. He is indefatigable in his search for data, and drives to his conclusions with a fearless hand. His frankness and enthusiasm win him friends; his courage in ready denunciation of what he considers as sham or unprofessional sifts them, and leaves with him those who are of most worth to him. He has a host of friends among the teachers, who will experience surprise that he has seen fit to withdraw from a body of which he was a most valuable member.



Official Department

MAY, 1893.

J. W. ANDERSON, - - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - Deputy Superintendent of Public Instruction

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The following decisions have been rendered since the last list reported:

450. A new school district is not entitled to any apportionment of the funds, either State or County, for the school year in which it was formed. The object of forming the new district between the first day of January and the tenth day of May in any year, is to enable a census of the children to be taken, in order to have a basis upon which to apportion the funds for the school year beginning on the first day of July next succeeding the formation of the new district. Children residing within the limits of the territory embraced in the new district, are entitled to attend the school in the district from which the new district was formed until the first day of July next succeeding the formation of the new district. If the residents of the new district think proper to begin the school therein prior to the first day of July, they must support it at their own expense.

451. Under the decision of the Attorney General, the funds apportioned in July of any year, having accrued from taxes levied for the school year ending June 30th, and from interest accruing during said year, belong to the school year ending June 30th; and, although the apportionment is not made until July, these funds are to be used for the support of schools for the year ending June 30th, preceding. Any balance is carried over to the credit of the districts for the year in which the apportionment is made. New districts are not entitled to any portion of the July apportionment.

452. During the year next succeeding the formation of a new district, there can be no apportionment for average daily attendance, because the new district is not supposed to have any such attendance.

Owing to the changes in the law governing the schools it has become necessary to revise many of the blanks. This will cause some delay in filling the orders for supplies sent in by the Superintendents; but all may rest assured that blanks will be sent in time for their use. The State Printer is hurrying forward the print-

ing of the Census Marshal's blanks as rapidly as possible, and they will be sent in advance of the other supplies. It is desired that Superintendents send in their orders as soon as possible.

Under the law as changed by the Legislature at its late session the census of children must be taken between the *fifteenth* and the *thirtieth* days of April, inclusive. The Census Marshals must be appointed on or before the 1st day of April; but, should the appointment blanks not reach you in time to distribute them to the various Boards of Trustees before the 1st of April, let the appointment be made as soon thereafter as possible.

The blanks contain all the instructions to Marshals that are needed; and it is hoped that Superintendents will impress upon their Trustees the desirability of conforming strictly to the law, and to the instructions given on the Census Marshal's blanks.

I desire to call the attention of Superintendents to the changes in the law relative to the matter of the census; and I trust that all will see to it that the law is strictly complied with. There has been much complaint of carelessness, and even of dishonesty, in reference to this important matter, and the law has been modified so as to remove occasion for this complaint.

Copies of the Omnibus School Bill were mailed a few days ago to all Superintendents. This office is now preparing the law, as amended, for publication; but it will not be possible to have the law issued much, if any, before the 1st of May. In this connection I desire to impress upon Superintendents, Trustees and teachers the desirability of making themselves entirely familiar with the changes that have been made. It is believed that the changes are all for the betterment of the schools, and the elevating of the profession; and although these changes may not be such as will be pleasing to all, I feel sure that they are all desirable ones. The law appertaining to the public schools has never had a more complete overhauling by Superintendents and by the Committees on Education in both Houses of the Legislature than has been given to it this year. The time devoted to its consideration rendered it impossible to get it passed by the legislature until a few days prior to the adjournment of the session; hence the delay in sending out blanks.

Whilst myself devoting much care and labor to the preparation of the law, I feel that much of that which has been accomplished is due to the persistent efforts of the friends of our schools. Particular mention may be made of the able services rendered by the Chairman of the Committee on Education in the Assembly, Hon. J. L. Sargent, of Amador county. Mr. Sargent made the passage of this bill the special object of his attention. A young man of few words, he is a strong and influential man in that action which, more than eloquence, tells in the halls of legislation. The teachers particularly, and all friends of our public schools owe to him gratitude for his fidelity in guarding the interests of education in the important position which he occupied during the session of the Legislature.

To the earnest and efficient efforts, also, of the Hon. J. C. Sims, Assemblyman from Sonoma, great credit is due. I shall not forget his good offices in behalf of the bill. Influential among his fellow members, by manly and modest bearing as well as by his ability, he rendered valuable aid in securing the passage of the bill.

To the Hon. C. F. Bennett, Assemblyman from Orange county, very great credit is due. The interest manifested by him showed itself perceptibly at all

times. Like Messrs. Sargent and Sims, he is a worker, one of whom his constituency have great reason to be proud.

I would do violence to my own sense of right were I to omit from the list of active friends of our schools, and particularly of these amendments, the names of Senators Guy C. Earl, of Oakland, and Bart Burke, of Santa Cruz.

It affords me great pleasure, however, to record the expression of my great satisfaction in consequence of the interest manifested by the members of both Houses. However much discussion and diversity of opinion might exist on other matters coming before the Legislature, there was but one opinion on educational matters, and the bill passed by the unanimous vote of all present when it came up for final consideration. I regard the unanimity of action on the part of the Senators and Assemblymen as a personal compliment, as well as a most forcible expression of the estimation in which they all hold our public schools. In behalf of myself and the great interests which I have the honor to represent I tender to all my heartfelt thanks.

We had the pleasure of being present for a portion of the time during the Institute held at Grass Valley in Nevada county. Superintendent Rogers, the teachers, and the people are to be greatly congratulated upon the success attending the exercises of this meeting. We have seldom seen an Institute in any part of the State so well attended by the citizens. The exercises were such as not only to reflect great credit and benefit, but also to do much in generating a still greater degree of enthusiasm on the part of the teachers and the friends of our public schools in Nevada county. The people of Grass Valley are particularly alive with interest in the cause of education. This fact is clearly noticeable in the liberality displayed in the erection of a large eight-class building. Few cities in the State have a better one. There is a constantly growing disposition on the part of the people all through the State to provide more and better appliances and accommodations for their children. I regard this as the clearest evidence of the growing interest, and the increasing appreciation, on the part of the people, in all things appertaining to public education. This interest and appreciation ought to be a stimulus to our excellent teachers to strive for still higher degrees of thoroughness and interest in the great work in which they are engaged.

I have just had an interview with the Secretary of State, who is one of the members of the State Board of Examiners. I learn, with great regret, that the appropriation for the State Printers' Department, for the fiscal year ending June 30th, is so nearly exhausted, that it will be impossible to have the edition of the School Law printed prior to the first of July. Indeed, it becomes necessary for the State Board of Examiners to curtail my orders for supplies. The consequence is that delays in sending out supplies will occur. Should the requisitions of Superintendents be only partially filled, the deficiency will be accounted for by the fact that we cannot get a sufficient quantity of blanks, etc., at present, to enable us to fill them. We hope, however, to be able to supply all that may be needed, though it will be absolutely necessary to send them out to the Superintendents in detached parcels. Our budget of printing was sent in as early as March 24th, but it is impossible to get our order filled. As a consequence, we are compelled to do just the best we can. The fact that we cannot send out all the blanks, etc., required,

at one and the same time, has occasioned this office much additional labor, and we fully recognize that it will cause additional work for the Superintendents; but we are powerless to remedy the trouble.

Many questions are asked relative to the July apportionment. Under the decision of the Attorney General, that apportionment will be applicable to the payment of teachers' salaries for the year ending June 30th, 1893. And any balance remaining will be carried to the credit of the several districts for the year beginning July 1st, 1893.

On account of pressure of official duties Superintendent Anderson was compelled to relinquish the management of the examination of school children competing for the *Examiner's* trip to the World's Fair.

Significant Decisions.

The decisions of the Supreme Court on school questions sent up from San Diego place the relations of cities to the county government, so far as the school department is concerned, in a new and peculiar light. The gist of the matter is that a city which, unless subdivided, constitutes a single school district, is in school matters to be treated exactly as any other school district within the county. It would follow then: (1) That a special school tax for a city must be levied by the Board of Supervisors. (2) That the city school funds must be placed in the county treasury. (3) That all moneys collected by city boards of education must be placed in the county treasury. (4) That employees of the city school department must be paid through the county officials. The decision is based upon the principle that the school system has been established by the State, being provided for in the Constitution. That the Legislature has made provision for the formation of school districts, and has assigned to certain district, county and State officers duties relating to the schools. That the municipal organization for local advantage, and the municipality as a school district, are separate and distinct. In short, that in school matters the general law is supreme.

This attitude and relation of the State to the schools, thus clearly defined by the highest authority, is a matter for congratulation. This keen view will disclose many a musty corner, many a devious line. The public will probably see to it that no purchaser of school bonds will suffer in case of trouble arising under this interpretation, and officials will proceed in the future with clearer vision.

CALIFORNIA SCHOOL ITEMS.

ALTON, Mendocino county, has a new school house costing $2350.

THE new $5,000 school house at Santa Margarita is nearly completed.

$6,000 has been voted for an addition to the school building at Lincoln, Placer County.

A FINE new school house will be built in Elmhurst district, Alameda county, this summer.

TEN MILE RIVER District, Mendocino county, has voted $1,000 for a new school house.

THE Tulare High School has a class of eleven, to be graduated at the close of the present term.

THE Las Cruces school house, Santa Barbara County, with all its contents, was totally destroyed by fire April 12th.

ANOTHER Union High School District is contemplated in San Luis Obispo County, with Arroyo Grande as the center.

THE first class to complete the grammar school course at Hanford has just been graduated. There were 14 members.

YREKA has the advantage of an evening school. J. N. Matlick, President of the County Board of Education, is in charge.

THE work of enlarging school facilities goes on all over the State. Santa Rosa needs about $30,000 for school purposes.

W. H. LAREW, formerly a teacher in Mariposa county, is an aspirant for the Superior Judgeship of the new county of Madera.

EX-PRESIDENT HARRISON will deliver a course of ten lectures on general law at Stanford University in the autumn of each year.

YALE UNIVERSITY recently conferred the honorary degree of Doctor of Laws upon President Martin Kellogg, of the class of 1850.

GARDNER district, Santa Clara county, holds an election May 15th to decide whether $7,000 bonds shall be issued for the building of a new school house.

THE Republican nominee for School Superintendent of the new Kings county is A. P. Keran. The Democrats have nominated C. A. McCourt, of Lemoore.

THE San Bernardino High School Board has brought suit against the contractor for $8300 damages on account of delay in completing the High School building.

THE Menlo Park school building has been completed. It will not be occupied until next term. It is one of the most attractive schoolhouses in the State, and the citizens of Menlo are justly proud of it.

PROF. BARNARD, of Lick Observatory, is lecturing before large audiences in the East on Astronomy. Vanderbilt University at Nashville, Tenn., in which institution he was an instructor when called to Mt. Hamilton, has just recognized his eminent success as the discoverer of the fifth satellite of Jupiter by conferring upon him the degree of Doctor of Science.

CITY SUPT. DE BURN, of San Diego, has inaugurated a new plan of instruction in some of his grammar grade classes. It is a method of departmental work. The branches are grouped as nearly kindred as possible. The order of exercises is so arranged that each instructor remains seventy minutes in a room for two recitations, one requiring fifty minutes and the other twenty. The results are beneficial, as the instructors are assigned such subjects as each is best adapted to teach.

THE plans for the Siskiyou County High School have been selected. They comprise a two-story building, with a frontage of seventy-six feet and sixty-four feet in depth. There are three class rooms on the first floor and two on the second floor. There are also teachers' rooms, apparatus room, library and reading room. The attic will be finished as an assembly hall, 34x56 feet, with a 16 foot ceiling. The material is brick with sandstone trimmings. The tower will be quite a feature, reaching a height of 106 feet from the ground.

THE new Redlands High School has been completed. The building cost $20,000, and is one of the finest educational edifices in the State. Its completion solves the important question of proper school facilities, and is a striking evidence of the prosperity and advancement of a thrifty community. According to the plans, the building just finished is but the east wing of what will eventually be a handsome school building, costing at least $50,000. For the present, however, it is calculated that the new east wing will afford ample provision for the needs of the Redlands, Lugonia and Crafton school districts.

DURING February and March, in the city of Alameda, Prof. Earl Barnes gave brief lectures outlining lines of investigation, followed by discussion on the data collected by the teachers during the week. The following subjects were taken up: February 10. Children's Spontaneous Drawing.—As a basis of intelligent drawing. February 17. Defective Spellers.—To determine the reasons why some children spell naturally, while others have great difficulty. February 24. Children's Lines of Interest.—To determine along what lines a child's interest most naturally leads out into the external world. March 3. Development of the number sense.—With an experimental study on lines of error in arithmetical calculation.

APROPOS of the agitation over the study of Hamlet in the Oakland High School, the *Journal of Education* has the following:

"All honor to the modest and sensible youths and maidens of the Oakland High School who revolted against studying an unexpurgated edition of Hamlet! The indecencies of Shakespeare in the complete edition are brutal. They are more than indelicacies, they are indecencies. They are no part of Shakespeare's thought, have no connection with the play, and can be eliminated with as little

jar as could the oaths of the modern slugger. Indeed, Shakespeare's vulgarity was, to all intents and purposes, profanity, scattered promiscuously through the lines with no more meaning than so many oaths."

"In the times when they were spoken, such vulgarity attracted no more attention, even with pure-minded men and women, than oaths do to-day with those who spend much time among profane men."

SAN FRANCISCO.—The following plan for the selection of teachers was recently adopted by the Board of Education: First—The first six vacancies occurring shall be filled by appointment from the graduates of the normal department of the Girls' High School, the selections to be made by a special committee hereinafter to be designated from among the twelve graduates with the highest percentage. Second—A competitive examination of the graduates of the City Normal School, exclusive of the graduating class of the current year, shall be had, and the twelve who prove themselves best qualified shall be appointed. These eighteen persons shall be named to fill the first eighteen vacancies, all other appointments to be made in the same manner as now, but the appointees must be graduates of a normal school or its equal in rank, or had one year's experience in teaching and hold a first grade certificate. The committee to conduct the examination shall be the school superintendent and five members of the faculty of the University of California.



THE Union High School at Oroville shows the following attendance by districts: Oroville 35, Thermalito 4, Wyandotte 3, Forbestown 1, Mesilla Valley 2, Cottonwood 1, Biggs 1, Central House 1, Lone Tree 1, Reservoir 1. Total 50. Average attendance, 43; Middle Class, 8; Juniors, 42. There are three courses—Scientific, Literary, and Classical. Non-residents pay a fee of $50 a year, one-half in advance, and one-half in the middle of the year. J. E. Hennessy, Principal, sends this admonition to patrons: "No pupil can do the required work without giving at least three hours a day outside of school to careful and attentive study. Parents and guardians should require that study hours be regularly observed if they expect pupils to make progress in the high school work."

INYO COUNTY.—The Inyo County teachers had an interesting session of Institute, Superintendent J. H. Shannon presiding. Ex-Superintendent Clay Hampton was vice-president, Miss Clara Coughlin, secretary. Not only were all the teachers in active service present, but many who are not at present engaged in the work attended. The program was excellent. Class exercises accompanied the presentation of subjects in nearly every case. Miss Laura Bell spoke on Primary Geography; Miss M. E. Mahoney on Literature; C. W. Rathburn and Mrs. F. H. Bulpitt, Spelling; C. Hampton, Science; H. H. Heath, Composition; Miss Bell, Music; Miss C. Rannels and P. H. Willis, Arithmetic; A. E. Janvier, Course of Study; H. H. Howell and Miss Leora B. Collins, Physiology and Hygiene; Mr.

Dixon, History; Miss Jennie Shirley, Language. A somewhat rare feature was the appearance of one of the lady teachers, Miss Mamie Coughlin, as the lecturer of the evening. Her subject, "Moral Culture," was ably handled. Elocutionary and musical numbers were delightfully sandwiched into the program. The careful and thorough instruction given in the schools was fully shown by the pupils who appeared in class exercises. Though a remote and sparsely populated county, the program, the character and quality of work, and the interest shown, at this season, demonstrated that Inyo is well to the front in zeal and intelligence of methods. Supt. Shannon is to be congratulated.

F. J. NETHERTON, who graduated at the Oakland High School several years ago, has been appointed Superintendent of Public Instruction, Arizona.

THE engineering building of the State University is rapidly nearing completion and now begins to show its beauty of structure. It is expected to open the building to the students at the beginning of next term. An excellent electrical engineering course will then be opened, where practical as well as theoretical work may be followed.

THE school Trustees of Petaluma are about to open a night school.

PROF. SWAIN, one of Stanford's most distinguished professors, has accepted the presidency of Indiana University.

PROF. TODD, of the Romance Language Department, Stanford University, has resigned to accept a similar position in Columbia College.

GREENLEAF DISTRICT, San Bernardino county, will have an election May 27th, to determine whether $1600 bonds shall be issued for school purposes.

MRS. MARY E. HART, secretary of the Southern California Science Association, has been appointed Superintendent of the Historical and Scientific department of the World's Fair.

☞ Teachers will please take notice that the date of the World's Fair Excursion, to be conducted by the editor of the JOURNAL, has been changed from June 5th to June 1st. Register at once. A delightful trip assured.

Business Notices.

We call attention to the many matters of interest presented in our advertising pages.

The special Teachers' excursions under the management of the JOURNAL will leave for Chicago June 1st and about July 1st. Teachers desiring to join either of these parties on the dates mentioned, or whose vacations make it necessary for them to leave California at some other date, are requested to communicate with the editor of the JOURNAL.

We call special attention to the advertisement of C. F. Weber & Co., on 4th page of cover. This house has long been noted for fair dealing and the quality of school supplies furnished.

School people the State over will doubtless read with interest the announcement on page ccxxxviii of this issue. There is undoubtedly need of vigilance on the part of school officers, who are in duty bound to expend the public funds under their control, not for the enrichment of trusts, but for the fullest possible advantage to schools.

AGENTS WANTED—BIG PAY for vacation work right in your own county. Exclusive territory. No book canvassing. For terms and particulars address Work and Play Publishing Co., 418 East 9th st. (Y. M. C. A. Bldg.), Kansas City, Mo.

OUR LIBRARY TABLE.

PROF. LOWELL, of Roxbury Latin School, has prepared for young readers, in "Jason's Quest" the interesting story of the search for the Golden Fleece. The work is delightfully written, has numerous attractive illustrations, and is published by Leach, Shewell & Sanborn, Boston and New York. 238 pages, bound in cloth, and price only 50 cents.

DR. MORSE'S ANTI-HEADACHE WAFERS. Positively guaranteed to cure **HEADACHE** and **NEURALGIA**. Especially adapted to Nervous Headaches caused by over-application to study, and the constant worry and care of the school room. **Price, 25 Cents.** For sale by all Druggists or sent postpaid on receipt of price.

OSCAR J. MAYER, Pharmacist,

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RESTORE YOUR EYESIGHT

Cataracts, scars or films can be absorbed and paralyzed nerves restored, without the knife or risk. Diseased eyes or lids can be cured by our **home treatment.** "We prove it." **Hundreds convinced.** Our illustrated pamphlet, 'Home Treatment for Eyes," free. Don't miss it. Everybody wants it. "THE EYE," Glens Falls, N.Y.

QUICK STUDY. LATIN and GREEK at sight, use our "INTERLINEAR CLASSICS." Sample pages and Catalogue of School Books, free. C. DESILVER & SONS, Pubs., Phila., Pa. Address all orders, wholesale or retail, to

The Baker & Taylor Co., 740 Broadway, N. Y.

A Tonic

For Brain-Workers, the Weak and Debilitated.

Horsford's Acid Phosphate

is without exception the Best Remedy for relieving Mental and Nervous Exhaustion; and where the system has become debilitated by disease, it acts as a general tonic and vitalizer, affording sustenance to both brain and body.

Dr. J. C. Wilson, Philadelphia, Pa., says: "I have used it as a general tonic, and in particular in the debility and dyspepsia of overworked men, with satisfactory results."

Descriptive pamphlet free.

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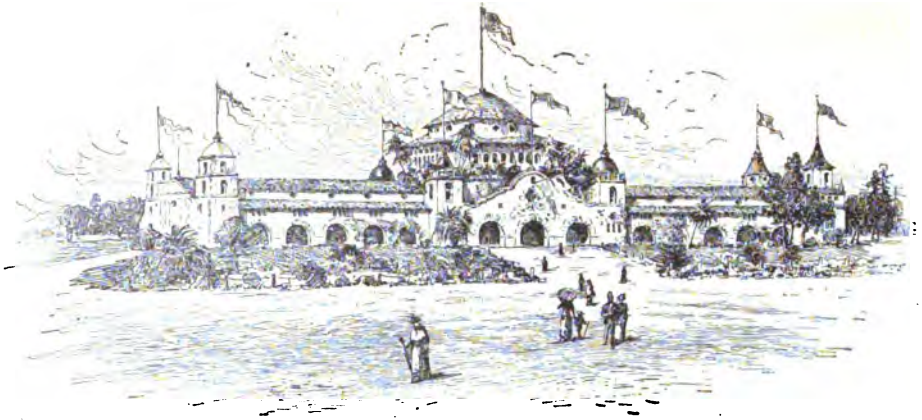
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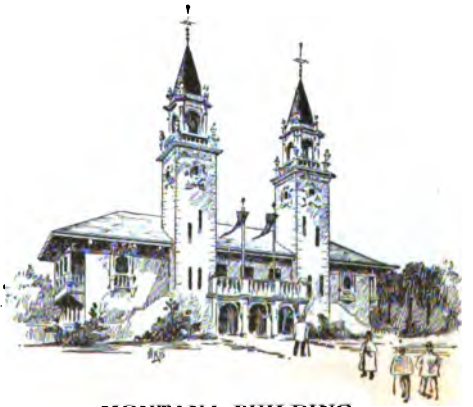
Summer Meetings:—Pacific Grove Retreat Association. Annual Meeting. F. F. Jewell, D. D., President. June 15th.
Young Men's Christian Association Excursion. H. J. McCoy, Secretary. June 15th.
District Conference and Summer Encampment. F. D. Bovard, D. D., President. June 22–29.
Chautauqua Assembly. A. C. Hirst, D. D., LL. D., President. July 3–16.
W. C. T. U. Summer School of Methods. July 18–25.



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THE

PACIFIC EDUCATIONAL JOURNAL.

Official Organ of the Department of Public Instruction of California.

VOL. IX. JUNE, 1893. No. 6.

CURRENT EDUCATIONAL THOUGHT.

Do not for a moment lose sight of the fact that the study of books and other appliances is of secondary importance; the child should be your great, your absorbing study.—SUPT. F. MC G. MARTIN, Sonoma County, to her teachers.

THERE is nothing so sure to steady the nerves of the fretful and excitable child as regular school work in the hands of a real teacher. Many a child who is celebrated for dangerous fits of temper at home becomes entirely transformed under the influence of such a school, till her nearest relatives would not recognize her if they should ever take the time and the trouble to visit the school-room. I mean a school-room where, without any inducement but the natural desire for knowledge which is all sufficient with any American child if it be rightly directed, you find steady and well-ordered labor, without haste, though not without rest, and honest, thorough and pleasurable work."—ANNA C. BRACKETT, in *Harper's Magazine.*

In school government the personal authority of the teacher and the obedience of the child are here the first considerations. But strength of will is as desirable an element in the child's character as obedience. The fine balance of *obedience*, submission of will, on the one hand, and *self-respect*, independence, exercise of will, on the other hand, is to be sought in all school government. Obedience and independence are pre-requisite of efficient instruction. They are first steps toward character building; but in the interest of true character building obedience to outward authority must be changed over as rapidly as possible into obedience to the inner authority of conscience; and independence must be softened and purified by sympathetic regard for the good of others.—ELMER E. BROWN, Berkeley.

GENERAL DEPARTMENT

Manual Training in the Schools.

FROM GEORGE ELIOT'S STRADIVARIUS.

And as my stomach, so my eye and hand,
And inward sense that works along with both,
Have hunger that can never feed on coin.
Who draws a line and satisfies his soul,
Making it crooked where it should be straight?
An idiot with an oyster-shell may draw
His lines along the sand, all wavering,
Fixing no point, or pathway to a point;
An idiot one remove may choose his line,
Struggle and be content, but God be praised,
Antonio Stradivari has an eye
That winces at false work and loves the true,
With hand and arm that play upon the tool
As willingly as any singing bird
Sits him to sing his morning roundelay,
Because he likes to sing and likes the song.

RONALD P. GLEASON, SUPERINTENDENT OF MANUAL TRAINING, SCHOOL DEPARTMENT, OAKLAND, CAL.



The plan and scope of manual training is so often misunderstood that perhaps I cannot give you a better idea of what it is than by telling you what it is not.

It is not a system by which a trade or a profession shall be taught, neither is it a fad, to be taken up for a little while, then dropped and soon forgotten. It is not an attempt to turn every boy into a finished cabinet-maker or mechanic, nor every girl into an artistic carver, cook or dress-maker.

It is an earnest and thoughtful effort, to give the boys and girls of our country a complete and symmetrical education. Not to educate their heads at the expense of their hands, but to educate their hands *as well*, and so obtain symmetrical development.

HARMONIOUS DEVELOPMENT.

Education to-day means more than a training of the memory. In its best forms it includes complete moral, mental, and physical development of our boys and girls, as a preparation for a life of *work* and good citizenship. The whole idea of education in the public schools is to develop the child in a *harmonious* manner.

Many of the opponents of this branch of education claim that it does not develop harmoniously; that it is too one-sided, educating the hand at the expense of the head, and for that reason has no place in the public school system. Is there any *one* thing in the public schools of to-day that *does* educate harmoniously? Does arithmetic? Does grammar? Does writing? Does any *one* of the studies that are taught? Certainly they do not; but they are *all* needed to make up the harmonious whole.

Is it the place of the parent to give his child industrial instruction? Many say that it is, but how many parents have the time, or the inclination to do this, and if they do have the time and inclination, how many have the skill to instruct intelligently, or the means, or place to carry on the work?

Who, then, is to satisfy the demand for a harmonious education if not the school? The home is still less capable of giving a complete and harmonious training than it is of giving a partial one. The school was created by society, through which the educational duties of the family are to be fulfilled. Consequently the task will remain to the school, and only to it can the duty of harmonious training be assigned. The public school cannot be required to train ready men, for it has only children under its control; but it can be required to train harmoniously.

"Harmonious training does not mean finished training, but it means such training that all human powers and talents shall be symmetrically developed." The impression prevailing among many that manual training is designed to teach a trade is a mistaken one. Its aim is wholly educational, otherwise it has no place in the public schools. There is no reason why the trade of carpentry should be taught any more than that of engraving or printing. But there is every reason why a boy should be taught to supplement his head with his hand, and every reason why he should obtain that manual dexterity that is the foundation of all crafts and trades.

Ours is more than anything else an industrial country. More than 90 per cent. of the youth are destined, according to statistics, to

enter this great industrial life. Does this not furnish one great reason why they should have a manual as well as a mental training? Should not their education give them the elementary training that would make their work easier and more hopeful? Not all our graduates can enter the professions, in fact only a very small proportion of them. A few can become clerks, bookkeepers and salesmen, but 90 per cent. more—a great army—take up active manual work. Of how little value has their purely *mental* education been to them compared to what it would have been had their hands had a chance as well?

A LENGTHENED SCHOOL LIFE.

It has been for many years a matter of regret and annoyance to educators, that the pupils leave the public schools so early. A large per cent. of the boys particularly, drop out before the end of the grammar grades, and thousands never reach the high school. "They have to stop and go to work," they tell you. In the manufacturing States strict legislation has sought to *compel* children to go to school a certain number of years, and to prevent manufacturers from giving them employment before they reach a certain age, and the State pays inspectors to visit the mills and see that the law is enforced.

If the course in the public schools included a hand development, as well as mental training, and if they could get a manual dexterity and ability that would help them in their future work at the same time that they obtained the rest of their education, many thousand boys and girls could add three or four years to their school life, and finally go to work, better equipped physically and mentally, with healthier bodies and more fully grown, and at the same time much better prepared for their life work. And this has been found to be the case in every city where manual training is taught. It has added several years to the school life of hundreds of boys and girls who would otherwise have had to leave school half grown, half developed, and not nearly half educated, to go to some work, where they must begin at the very *lowest round of the ladder*, their school life having helped them in that not at all.

THE MIND A GAINER.

But it must not be thought that manual training is a help to the *hand alone*, that the mind is not at all the gainer; for that is far from true. Manual training is not only a means for *objective* teaching, but it is of great *educational* value. It is a deep-reaching mental and physical disciplining power, and so "contrives a double debt to pay."

Practice with tools requires no small amount of mental and physical self-control. It arouses the power of observation, and without any artificial means, it forces the boy to concentration, attention and perseverance. It also nourishes thought and will, and directs it toward the good and useful. It sets into activity the greatest number of senses and powers, and secures knowledge and information which no other instruction can secure.

In the schools for *feeble minded*, it is the unanimous report that most excellent results have followed the introduction of shopwork, in strengthening the feeble mental powers of the pupils. In these schools such training has been introduced almost wholly for its effect on the *mind*, though its effect of strengthening weak *bodily* powers, that so often accompany weak minds, is not to be despised.

It is found that the mental efforts necessary to try to cut to a line, saw to a line, or fit a joint with accuracy, awakes dormant powers, and gives them strength. Then the worker is further developed in mind by the sight of the work growing under his hand, he sees the illustration of cause and effect, and his mind is made more receptive to new ideas. The experiment has proved successful, far beyond the most sanguine expectations of those who introduced it. If manual training does all this for the *feeble* minded, how much *more* will it do for the *eager, active* mind and the strong, healthy body? Isn't it about time that we sent the *whole* boy to school?

THE PHYSIQUE IMPROVED.

Manual training also improves the physique of the child by giving him better control of his muscles. A boy has a natural inclination for movement. The ordinary school compels him to sit still in the same spot for hours. The boy has a natural inclination to employ himself. The school forces his attention toward abstract instruction for which he has little interest because the benefits lie so far from his needs and his circle of vision. Manual training gives a boy or girl an opportunity for exercise for strengthening and educating muscle, and it also gives an opportunity to *do* or to *make*, which is always a *real pleasure* to an active boy or girl.

From the time he builds his first block house until he becomes a man a boy delights in building and constructing. There is nothing more interesting than to watch a boy's pleasure and pride as he sees the rough boards grow into something useful, and perhaps beautiful, under his hands,—certainly it will be beautiful to him. It is just as honest and reasonable a pride as that the artist feels in his picture, or

the architect in his first public building. And how much better off the boy is for his active, healthy labor! And what if this boy, as is often the case, has no home worthy the name, and no good influences surrounding him. Perhaps that poor box or stool, and his honest pride in it, will help to lift his soul from the depths around him, and give an impetus to energy and ambition that will help to make him a better man and a better citizen.

MORAL STANDARD RAISED.

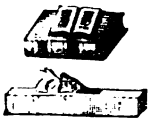
A very interesting report comes from England to the effect that a constant decrease has been going on in prison populations there for the last fifteen years, and that this decrease still continues. It is of interest to note that the English explanation of this decrease is entirely in harmony with one of the arguments that have been used by the friends of industrial education in America. The *Industrial Schools Act* is given the entire credit for working out this splendid result in English society. Crime flees before education in the public schools, while *industrial* education secures the social salvation of multitudes of children. The proof of boasted advantages lies in results, and the friends of industrial training here have something tangible to point to, in the marked lessening of the inmates of British prisons and the universal testimony in that nation as to the cause of it.

Parkhurst says that "Industrial ignorance is the mother of idleness, the grandmother of destitution, and the great-grandmother of socialism and nihilistic discontent." But manual training has passed the *trial* stage. It is not a fad to be laid aside and soon forgotten. It has come to stay. It can't be laughed out of court. Educators, with remarkable unanimity, agree in urging its importance; few schoolmen now ridicule or object to it.

Besides the scores of cities that now include it as a regular part of their school course, there are several large institutions devoted to manual training all founded by practical men of affairs. They believe in it because, as men of business, it appeals to their common sense. Such schools are the Pratt Institute of Brooklyn, the Drexel Institute of Philadelphia, and the recent gift of a building and a million dollars in money from Philip Armour, of Chicago.

In giving our boys and girls a *manual*, as well as a mental training, we act according to the views and in the spirit, of our great educators, and fulfill the high aim of the public school—"to train the children to be mentally active, socially useful, and morally good men and women."

PRESIDENT C. H. KEYES, THROOP INSTITUTE.



Throop Polytechnic Institute, Pasadena, was founded in 1891, by Hon. Amos G. Throop, who endowed it with $200,000. The school was first intended to cover the broad field suggested by the title University. Later and wiser counsel prevailed and in 1892 it was determined to devote all resources and energy to building up a first-class co-educational Manual Training school and Institute of Technology. A large four story building, the Wooster Hall, was leased for a term of five years for a students' dormitory and dining hall. A structure known as Polytechnic Hall was erected and equipped for use by September of 1892. This building contains the chemical and physical laboratories, the cooking room, the sewing and dressmaking rooms, carpenter and turning shop, molding shop, pattern shop, forging shop, machine shop and a number of class rooms. A strong faculty was engaged, containing representatives of the Massachusetts Institute of Technology, Worcester Polytechnic Institute, Toledo and St. Louis Manual Training Schools, the Purdue and Wesleyan Universities, Universities of Minnesota, of Nebraska, of Zurich and of Geneva.

Courses of study emphasizing English, mathematics and natural sciences, together with hand and eye culture, were projected. Generous provision was also made for German, French, Spanish, Latin, Greek, History and other subjects. Books are used only as guides to work, the laboratory and seminary methods prevailing. Each student carries three studies and besides spends three-quarters of an hour in the draughting room and one and one-half hours in shop daily throughout the course, which extends over four years. The following outline indicates the five parallel lines which constitute the Manual Training course.

First: A course in English language and literature, history, civics and economics. Especial attention is paid to the study of the English. No other proficiency excuses lack of ability to write and speak the language of the land with fluency and accuracy.

Second: A course in mathematics, including higher arithmetic, mensuration, book-keeping, algebra, geometry and trigonometry.

Third: A course in science, including biology, geology, physics and chemistry.

Fourth: A course in free-hand and mechanical drawing.

Fifth: A course of tool instruction, involving carpentry, wood-turning, molding, brazing, soldering, forging, bench and machine work in metals, and special work in electrical appliances.

Latin and French or German are permitted as elective with part of the English, science and economics. The first four lines are identical for both young men and women. In the fifth line the young ladies take the light carpentry and wood-carving, and for the remainder substitute work in domestic economy, including cooking, chemistry of foods, sewing, cutting, fitting, home decoration, house marketing, etc.

To more clearly indicate the characteristic features of this department the courses in the fourth and fifth lines above referred to are given in full. They are as follows:

First year: 1. Freehand drawing from objects and from casts, ornaments, designing and lettering. 2. Practice line sheet with instruments. 3. Simple projections with geometric problems.

Woodwork: 1. Joinery. 2. Wood-turning. 3. Wood-carving.

Second year: 1. Orthographic projections with line shading. 2. Intersection of solids and developing of surfaces with flat tinting. 3. Isometric projections.

Forging: 1. Bending and upsetting. 2. Welding. 3. Tool-making. 4. Ornamental iron work. 5. Brazing.

Third year: 1. Cornice designs with patterns for shop. 2. Working drawings. 3. Higher geometric problems. 3. Construction of gears, etc. 5. Tracing and blue printing.

Shop-work: 1. Pattern making. 2. Molding. 3. Tinning, cornice work, metal spinning. 4. Chipping and filing. 5. Machine shop exercises.

Fourth year: 1. Perspective. 2. Shades and shadows. 3. Architectual, floor plans, elevations, pen sketching. 4. Brush shading. 5. Final drawing.

Shop-work: 1. Building machinery—electrical machines, mechanical machines, physical apparatus. Electrical work, wiring, lighting, etc.

The course in drawing for the young ladies is practically the same as the one just given, but the work of the fifth line is as follows:

First year: 1. Light carpentry. 2. Clay-modelling and wood-carving.

Second year: 1. Course in plain sewing, various stitches and seams in muslin work, buttonholes, patching, darning, and one garment made entirely by hand. 2. Practice in machine sewing. 3.

Drafting of patterns for underwear from actual measurements and the making of these garments by application of hand and machine sewing. 4. Instruction in quantity, quality and materials used. 5. Home decoration.

Third year: 1. Instruction and actual practice by each pupil in cooking, including boiling, broiling, baking, frying and mixing, with their subdivisions. 2. Chemistry of cooking. 3. Instruction in the purchase and care of household supplies. 4. Arrangement and decoration of the table.

Fourth year: 1. Dressmaking. 2. Measuring. 3. Drafting. 4. Cutting. 5. Fitting and making of garments by each pupil. 6. Instruction in shopping. 7. Theory and art of dress as regards form and color. 8. Relation of dress to climate, condition and habit.

Following this course are advanced special courses in biology, physics, chemistry, surveying, electricity, civics and education. Particular attention is paid to the training of teachers for industrial and scientific work. There is also a fine art department in connection with the school in which high grade work in water-colors, oil, charcoal, crayon and pencil is done. Excellent departments of vocal and instrumental music are also in operation.

The attendants for the present year have numbered one hundred and seventy-one, representing seven counties of California, six other States of the Union and Canada.

A new three-story brick building, 150 feet by 68 feet, is now in process of construction and is to be ready for occupancy September 15th. It will contain an assembly hall for 400 students, a library for 8,000 volumes, a biological laboratory and lecture room, an additional draughting room, a museum, nine class rooms, an armory, three shops, wardrobes, closets, etc. This will equip for the accommodation of 450 students in the fall.

"This is only a fad, a hobby! What do I send my boy to school for? Not to learn carpentering! He can learn that when he leaves school!" But, my friend, your boy who just left the High School, what can he do to earn a living? Sell dry goods, be a clerk, a bookkeeper? No, these vocations are overcrowded. His education is one-sided for he does not know how to use his hands. He would rather walk the streets cane in hand and spend money. He has enough ability to be a contractor, a builder, a civil engineer, the manager of a machine shop, foundry or planing mill, but he thinks the beginning

of these occupations beneath him, so he is idling away his time. Manual Training is not a cure for all the errors in school training, but it will help to make book-work more profitable. It deals with things, not with descriptions. It satisfies the child's desire for action.

The boy may remember what he sees or hears in a vague sort of way, but what he *does* makes an impression which becomes a part of his being, becomes knowledge which can be utilized in any direction. The knowledge gained by doing is his chief source of power. How much grammar did our fathers know when they could repeat every rule and observation in Gould Brown's largest book? Children of to-day like their language lessons because they like to *do*. Manual Training is only more doing—systematic doing, doing which requires thinking. The child cannot work in Manual Training without learning to be exact, and exact work necessitates exact thinking, which is a long stride in right education. "The pupil can deceive neither himself nor his teacher. His work, not his words, is the sole test of the truth of his thought—if true, it needs no proof, if false, it is false on its face."

In October, 1891, rooms in the basements of the San Diego city school buildings were arranged for shops, and carpenter's tools supplied for the three higher grammar grades. The work of the first year was mostly process-work. Exercises were planned in which systematic drill could be given in the use of the try-square, rule, gauge, saw, chisel, plane and hammer. Instruction was given in the care of tools, the theory and practice of sharpening; the properties and uses of the various kinds of wood, and towards the end of the term a few useful articles were made.

The second year's work included a little process-work such as is done in the Cogswell school, San Francisco; but more attention was given to the making of furniture, such as shelves, tables, book-cases, secretaries, etc., in which redwood, pine, oak, ash and maple were used, and finished with shellac or hard oil. During the last part of the second year another class was added, and the time limited to seventy minutes a week for each class, the teacher spending a whole day in each school building.

The steadily increasing enthusiasm of the pupils has always made instruction in this department pleasant, and the encouragement and support given by the school officers and patrons argues favorably for the future of Manual Training in the San Diego schools. While the equipment is far from complete, the work has been one of steady

growth and its wholesome effect on the mental grasp of the boys is becoming more noticeable every day. The benefit received by the girls is no less marked, for, though they do not have a special teacher, they are instructed in the art of sewing by a most efficient corps of lady teachers, who can justly say, "Our girls as well as our boys are to rank high in useful, well-rounded citizenship.—OLIVER WEBB, teacher of Manual Training, San Diego Schools.

[In response to a request for a paragraph on the subject, the following were received.—ED.]

I believe in giving to as many children as possible the opportunity for Manual Training. In the larger towns and cities there ought to be at least one school, well equipped for that purpose. In small places with a single school, the expense of such additional equipment is too great; that is, if a variety of hand-work is to be taught. In cities it would be inexpedient, if not impossible, to attach a Manual Training annex to every school.—MARTIN KELLOGG, University of California.

The chief purpose of any rational system of Manual Training is, I take it, to give the brain control over the hand. This is as much mental training as the study of grammar and arithmetic, and it is essential to perfect mental development as well as to skill in meeting the various needs of life. Manual Training has therefore a claim to an important position in every well considered course of study.—DAVID S. JORDAN, Leland Stanford Junior University.

Bookishness is a thing I hate. I would have the children in our public schools learn not simply for the sake of knowing, but still more for the sake of doing. They should not form the habit of simply absorbing knowledge, as quicklime absorbs water and deadens itself in so doing; but rather the habit of turning thought into action. Manual Training is not the only means of developing that habit, but it seems to me one of the best. Doubtless it is not equally necessary in all schools, but in many it may fairly be regarded as indispensable, if the best educational results are to be secured.—ELMER E. BROWN, Department of Pedagogy, University of California, Berkeley.

Really, Manual Training will never be taken up seriously in the country schools. In the city it may prevail until some better form of

bodily exercise takes its place. A course of study, if obligatory, should not include it.—IRA MORE, Principal of the Los Angeles State Normal School.

I am heartily in sympathy with the Manual Training movement. I think every city of 10,000 inhabitants, or over, should have two classes of High Schools, one of which should be devoted largely to Manual Training. The course taken by students should be left optional with them. Experience has shown that in cities which have organized Manual Training schools, the number of students in the classical schools has not been lessened, while many attend the former whose student life would otherwise end with the grammar school course. By all means let us have public Manual Training schools in the cities.—EDW. T. PIERCE, Principal of the Chico State Normal School.

Our progress in Manual Training may be summed as follows: 1. Classes in cooking in one school; special teacher; two lessons a week. 2. Classes in sewing, with special teacher in one school. 3. Sewing in girls' schools, three, taught by class teachers. 4. In the Commercial High School: (*a*) Wood work; (*b*) Architectural drawing; (*c*) Free-hand drawing; (*d*) Type-writing and stenography. 5. In Lincoln Evening School, one class in mechanical drawing, one class in architectural drawing, two teachers.—SUPERINTENDENT JOHN SWETT, San Francisco.

We have nothing which would come under the head of Manual Training, unless it be a few experimental cooking lessons. We are expecting to introduce cooking and sewing next year.—W. M. FRIESNER, City Superintendent, Los Angeles.

In the matter of Manual Training we are at present doing nothing. Under the provisions of the new charter it is expected the subject will attract the attention of the incoming Board.—A. HART, City Superintendent, Sacramento.

San Jose is doing nothing in Manual Training, not that we do not believe in it to any extent, but we have had a chronic crowded condition of our schools which has necessitated a continual expenditure for buildings and we have not had the funds. As to my opinions on the

subject I will say that I have thought that instead of coupling Manual Training to our common school course as now taught, the State, county or city should establish Technical Schools for this purpose. In the absence of these, however, I do believe that dress-cutting and fitting could be introduced into our seventh and eighth grades for the girls with infinite advantages to the community, and some Manual Training in the High School.—F. P. RUSSELL, Superintendent, San Jose.



METHODS AND AIDS.

A Few Good Problems in Mental Arithmetic.

1. If it cost $1 to saw a cord of wood into three pieces, what, at the same rate, will it cost to saw it into four pieces?

2. Iron rails cost $1 a foot; what will one mile of railroad track cost?

3. If half of what I receive for my watch is gain, what is my gain per cent.?

4. What per cent. of 1/6 is 1/8?

5. If my coffee cup holds 2/3 of a gill, how many cups in one gallon?

6. What will one mile of wire cost at three cents a yard?

7. What will it cost to plaster a room 30 feet long by 20 feet wide by 10 feet high, at 3 cents per square foot, no allowance being made for doors and windows?

10. What will it cost to paint a front yard fence 60 feet long and 3 feet high, at 25 cents per square yard.

STOCKTON, CAL., May 17, 1893.

DEAR EDITOR: I send you herewith some lines which I composed for the benefit of my class in U. S. History. Every one realizes the value of rhyme and jingle as aids to the memory. Who has not repeated time and again the handy verses, "Thirty days hath September," etc.? Long ago the sovereigns of England were strung like so

many beads to be rattled as nursery rhymes. How many men and women are there who can readily name our Presidents in the order in which they were elected? I find that by the use of these verses I can readily teach a ten-year-old child a lesson in history which would be quite a mental task for an older person were he to try to learn the same facts in prose.

I would submit these lines to the boys and girls in our public schools, in the hope that they may find them of some value as aids to the memory.

J. D. ELDER,
Teacher of Burwood School,
San Joaquin Co., Cal.

OUR PRESIDENTS.

(Tune—"*Yankee Doodle.*)

AS SUNG BY THE HISTORY CLASS AT THE CLOSING EXERCISES OF BURWOOD SCHOOL, MAY 10, 1893.

I.

George Washington, first President,
By Adams was succeeded;
Tom Jefferson was next the choice,—
The people's cause he pleaded.
Madison was then called forth
To give John Bull a peeling;
James Monroe had all the go
In the "Era of Good Feeling."

II.

'Twas J. Q. Adams then came in,
And next came Andrew Jackson,
Who'd licked John Bull at New Orleans
With such great satisfaction.
Then Van Buren took the chair,
Then Harrison and Tyler—
The latter made the Whigs so mad,
They thought they'd "bust their biler."

III.

We then elected James K. Polk,—
The issue that did vex us
Was "Shall we 'do up' Mexico,
And take in little Texas?"
Taylor then got in the chair,
But soon had to forsake it;
Millard Fillmore filled it more,
Frank Pierce then said, "I'll take it."

IV.

Old Jim Buchanan next popped in,
Abe Lincoln then was chosen;
He found the current of events
Was anything but frozen.
Andy Johnson had a time,—
The Senate would impeach him;
But as it took a two-thirds vote,
They lacked one vote to reach him.

V.

And now we come to U. S. Grant,
The man who fought at Shiloh;
And Hayes, and Garfield who was shot—
They both came from Ohio.
Arthur then the scepter sways,
To Cleveland turns it over;
Ben Harrison sandwiches in,
And now again it's Grover.

A Practical Hint for Composition.

The following outline hints for a composition were printed on slips and distributed in January to the pupils of the grammar grades of the

Canton, Ohio, schools. Read the following directions and hints with close attention, then act upon them with your best skill:

Write a letter to Carlos Balboa, a young native of Cuba who has never been away from his island home. He knows nothing about what we call winter. He never saw snow on the ground, ice on the creek, frost pictures on the window, or ice spears hanging from the roof. He never dreamed of such a thing as an ice-house, and if he saw a block of ice he would not know it will float if thrown into the water. He would be scared, I think, if the glass of water would "tchick," to tell him the frost was drinking. He has almost no notion of how we warm our houses and how greatly they need it, and how we protect ourselves when out doors. Try to make him understand all these things and describe to him the country as it looked during our late big snow—the fields, the woods, the roads—what our winter sports are, describing one of these, and our serious labors and the hardships people sometimes undergo. Explain to him of what use snow is on our fields and among our mountains. First try to comprehend his ignorance of all these matters, then aim to enlighten it.

Set or Sit.

MISS JENNIE THORNLEY CLARKE.

The President of a female college in South Carolina once asked me, in all seriousness, "Do hens set or sit in Georgia?" When I replied, "We set the hens and they sit," he expressed a good deal of skepticism as to the results of such a proceeding. Let us consider a few forms of both verbs, and then, if I am wrong, I hope somebody will set me right, after which I will sit corrected.

We may feel reasonably sure that pupils will make correct use of irregular verbs when they are perfectly familiar with the principal parts, and able to distinguish, at a thought, the transitive from the intransitive. Familiarity with the principal parts will save us from hearing the past participle do duty as the past tense, and *vice versa*. Distinguishing the transitive from the intransitive will prevent confusion of such similar verbs as lie and lay, rise and raise, set and sit.

Write upon the blackboard and upon the tablet of memory:

Present.	*Past.*	*Past Par.*
Set.	Set.	Set.
Sit.	Sat.	Sat.

Emphasize the fact that the three forms of the first are identical; that it means to place; and that with this meaning, it is always transitive. The second never takes the form of the first, and is always intransitive. Now let us see them:

He sets the vase on the table. I set it on the mantel, and have set it there before. I sit at a desk, sat there yesterday, and have sat there for months. The box sits wherever I set it. It sat where I set it yesterday, and has always sat just where I have set it. I have set a chair at the window; will you sit there? Sit down. Set the lamp on the table. How long have you sat there? Have you set the chairs in place? Where does it sit? Who sits in it?

The intransitive verb *set* is seldom used except in the senses—to decline, to congeal, and to move in a certain direction. These must be pointed out and illustrated: The heavenly bodies set when they pass below the horizon; liquids set when they harden into solids; the current sets towards the west.

After all, eternal vigilance is the price that must be paid for pure English, and pupils cannot be drilled too much or too often in the use of all the regular verbs in common use.—*Southwestern Journal of Education.*

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

How He Got There—A Fancy.

C. M. DRAKE.

It was generally understood that Prof. Wiseman would be reappointed this June, on the Olive County Board of Education. He had a High School Life Diploma, his manner was pleasant, and his ability unquestioned. He had served for two terms with credit to himself and the cause of education. He had many friends and few enemies. He lacked but one thing. *He had no political pull.*

Yet as no other name had been publicly mentioned for his place, his appointment was expected by all except a half dozen men. But these were men with political pulls, and two of them were supervisors of Olive county. The other four were the county assessor, the district attorney, Mr. Bossman, a rich and influential democrat, and his impecunious cousin, Dick Brown.

In times that were past Dick had managed to get a certificate to teach in Olive county, though the envious ones whispered that his cousin paid a troublesome note for $50 which was worrying the County Superintendent about that time. This certificate died twice, and was resurrected again and again, and was finally converted into a life diploma in the troublous days of 1880. Then Dick had quit teaching, and had divided his time between politics and hogs, with varying success. An appointment on the Olive County Board of Education would add a welcome $500 a year to his income, and he was going after it. "We are sure of Jones and Smith," said Dick to his cousin Bossman. "They are democrats, and have promised you the place for me. Now we want a pull on a third Supervisor, and I think White is the man to go for. Then we will not neglect Greenley. I live in his district, and that counts big. I know it is of no use to try Wilson, for he is Wiseman's friend, and he hates me worse than he does the Old Nick."

"Yes, we can get Greenley," replied Bossman. "It seems that he gave his note for $500 which comes due the first of July, and he came to me yesterday for the money to meet it, offering to mortgage his house and lot in town. I told him you had the money, and I thought you might spare it if you got a place on the Board of Education to bring in other ready money. He took; for he asked me if I thought you would charge him more than 8 per cent., and I said you might not charge him more than that, though money was really worth 12 per cent. He will come to time, I think. But how are you going to get a pull on White?" "I am going to scare him," said Dick. "It will make an enemy of him, but he will go out before my next appointment comes around, so it does not matter much. You know White has money loaned out. I know of more than $8,000 that he has loaned in this county that he did not give in when he made his sworn statement to the assessor. Of course they all do that. But I primed the assessor and District Attorney Evans, and they have both given him a hint that I know about this $8,000, and feel inclined to push it through, but that I will be satisfied if I get his help on the appointment I want. It will go through."

And go through it did; and though outsiders did not know how it was done, they were much surprised to read in the papers that Prof. Wiseman had received one vote, and Richard Brown four votes which duly elected him as member of the Olive County Board of Education. Great is political pull, and more to be sought after than too much of unpractical learning.

NORMAL SCHOOLS AND UNIVERSITIES.

San Jose.

We have just let a contract for heating and ventilating the old building on the same plan which has proved such a perfect success in the new building. Two large steel fans will be kept constantly revolving, radiators will be placed in the rooms and corridors, and as by contract we can have any desired temperature, we expect to have the entire building under a perfect system of heating and ventilating.

Mrs. Wilson, whose health has been failing for some time, has been absent, recuperating at Smith's Creek. It is feared that she will be obliged to give up her work next year. Should such a misfortune befall the Normal, Mrs. George will probably fill her place. Mrs. Wilson is one of those noble, earnest women who endear themselves to all hearts and she is greatly missed from her accustomed place.

Miss Allie Felker has been elected Vice-President of the World's Fair kindergarten work, but has been obliged to resign, not being able to attend. Miss Felker who is a graduate of the San Jose Normal was also graduated from the Hailmann Kindergarten Training School with distinguished honors.

Returning to San Jose she was elected to a position as kindergarten teacher here in the Normal, but owing to a lack of school funds she was obliged to take a primary position and work her kindergarten methods into the primary work. She accomplished this with such wonderful success that her department has been filled with pupils throughout the entire term. The latest honors conferred upon her comes in this election as Vice-President of the kindergarten work at the World's Fair, thus recognizing her as belonging among the best and first on the Pacific Coast.—S.

German in the High School.

MARGARET H. J. LAMPE, TEACHER OF LATIN AND GERMAN, RIVERSIDE HIGH SCHOOL.

Some time ago a paper, entitled "German in the Preparatory Schools" was sent out by the State University for the purpose of suggesting the introduction of the subject in the High Schools of the

State, and of outlining a two years' course for the guidance of teachers. As the Faculty have thus publicly voiced their sentiments, it may be of interest to those planning to introduce the language into their schools to hear the views of a teacher who for some years has been engaged in the actual teaching of German to young students.

The professor's standpoint is necessarily very different from that of the teacher; the former considering only such pupils as are preparing to enter college, while the latter is in duty bound also to guard the interests of the majority of children whose school days end with the High School. Evidently the Faculty have tried to be very modest in their requirement, and certainly no objection could be made to the amount of work planned; unfortunately they have insisted on the one thing least indispensable, namely Grammar. This doubtless sounds like rank heresy, but please do not condemn me unheard.

To my thinking, both the proposed scope and the methods recommended violate if not every good, at least every modern, principle of teaching. The text books named tell the story in themselves. A Grammar, a Reader, a Composition text are to be used, not for the first few months but for two whole years, and these are to be supplemented by more Readers, more Composition texts, and by that galvanized corpse called a "Conversation Manual." The language is to be considered as dead, or rather is to be killed, so that it may painlessly be dissected and its parts examined in detail, and then by a current of mock enthusiasm, a few simple organs are to be stimulated to apparent life so that pupils may gradually become accustomed to the overwhelming impression of a whole live animal. The result will doubtless be that the pupils will feel, as did Owlspiegel, who said, after sleeping on one feather: "If one feather is so hard, how terribly hard must a whole feather-bed be!"

Spontaneous (?!!) work in composition is to be developed, sentence by sentence, in the class from natural material, whatever that may be. The children are to work a whole year on simple sentences, and may be led into the mysteries of complex ones only in the second year despite the fact that the four-year-old child says, and that spontaneously: "I'll go, if mamma says I may." Each sentence as formed and corrected is to be re-read by several pupils, and its idioms discussed before proceeding to a new sentence, doubtless that its freshness and spontaneity may be duly impressed on the class, their interest in the subject-matter maintained, and continuity of thought, or should we rather say words (?) assured.

"After three or four weeks of introductory drill the simplest reading matter may be successfully taken up, and may be made very interesting. At first the teacher might translate the lesson once or twice and let the pupils prepare it carefully; after that, gradually, simple new matter is given out in addition to some translated by the teacher; the new work is increased from month to month, until finally the whole reading work becomes the pupil's own effort." What an interesting and enthusiastic set of mental cripples would such a method beget! The pupil who *needs* to have a teacher translate his lessons for him *for some months*, and who is incapable of digging out his translations had far better spend his energies in digging potatoes. An injured limb may have its weight supported by the aid of crutches, but a sound one will be weakened by the inactivity resulting from such support. Aside from the debilitating effect of such a process, consider how inspiring such work must be! Certain women with affectionate but mistaken zeal thoroughly masticate meat, and then gently insert it between the lips of the growing child, so as to save it the hard work of chewing its own food. I once knew a woman who continued this edifying practice until her child was ten years old, and a more puny, scrawny youngster never walked the earth—a natural result of the tasty and nutritious food having lost its best juices. It is just as logical to expect the student to gain mental strength without the exercise of his own powers.

Next comes a statement which is a gem in its way: "It will be found beneficial to let the grammar drill alternate with the reading. Thus it will be shown to the pupils that the two are interdependent and complementary." One insignificant criticism I have to make on the latter half of the statement is that it is not true. Experience has shown that pupils can and do learn to read even difficult works fluently and appreciatively without any more grammar than is involved in memorizing declensions and conjugations, and a fair knowledge of sentence structure in English.

"The knowledge of the real meaning of words and idioms should always precede the figurative rendering." For instance, in the following expressions, "She struck an attitude." "He drives a hard bargain." "The girl played fast and loose with her lover." Shall we first have the pupils give the ordinary definitions for *struck*, *drives*, *fast*, before giving them the meaning of the idioms? Would not such a method of procedure be even more confusing to the student of a foreign language than to one reading his mother-tongue?

The closing paragraph of the article in question, however, caps the climax. It begins as follows: "To my fellow-teachers in the preparatory schools I would say, beware of false ambitions; leave the serious study of great authors and master-pieces to the University and confine yourselves to the laying of a solid foundation for such a study. This is very necessary and therefore noble work. Interest your pupils so that they find delight in their work," etc., etc.

There has for years been a united effort on the part of good teachers to displace the patchwork reader in the grammar grades by such work as "Evangeline," "Snowbound," "Christmas Carol," "Sketch Book," etc., for the purpose of creating a taste for good literature. In the face of this humanizing tendency we are asked to spend two whole years on reading books and collections of disconnected scraps instead of taking up the easier complete works of great authors. It is impossible that, as I at first supposed from the ambiguous expression "leave the *serious study*, etc.," there is any doubt as to the Professor's meaning; the list of books he recommends puts that to rest.

Wasting valuable time is one way of destroying life and, as those under our charge are really helpless in this, it is simply a murder of the innocents. Doubtless the pupil is too young to master great thoughts, but if he cannot fully digest them he may profitably chew the cud, when later, though more mature, he has less time to read. This is simply the application of the same principle as that involved in the use of memory gems. Doubtless the average High School pupil can not understand Hamlet, but does it follow that he must never read Shakespeare? I, for one, would not graduate a pupil incapable of reading "Merchant of Venice," or "Julius Cæsar" with pleasure and profit. So, because Faust is too difficult and Wallenstein too heavy, is it absolutely necessary to deny pupils the pleasure of reading such works as "Iphigenia," "William Tell," or "Joan of Arc?" Not only do I devote the second year's work to the reading of dramas and sometimes novels, but I aim to have some short valuable work read at the close of the first year; for instance, I devote the last three or four weeks to Schiller's "Song of the Bell," a poem that most German children know almost by heart. My purpose is a double one; first, to give the class a fore-taste of what they may enjoy the next year, thus stirring enthusiasm for future poems to conquer; next, giving those who are not able to stay in school for the second year's work something of permanent value and encouraging them to try reading good

authors by themselves, of course furnishing them with lists of the easiest works in prose and poetry.

Perhaps, as the proof of the pudding is in the eating, I may be pardoned for stating that my pupils have done me credit after reaching college.

Considering the age and mental state of our pupils, I would say in conclusion that I feel very sure the plans recommended would not only result in a waste of time and energy on the part of the pupil who ends study with the High School and who would gain little permanent benefit from such a course, but would make the student preparing for college so thoroughly mechanical in his method of study and habit of thought as to dull his power of perception and make him incapable of appreciating the great authors when he at last reached them in University work. Literary enthusiasm, to be genuine and spontaneous, must be stimulated and guided in early youth while imagination is more active than reason, while the study of grammar and comparative philology, so strongly urged, is better reserved for the later period of maximum activity of the logical faculty.

EDITORIAL.

THIS is the vacation number. Many of the schools will be closed. Many of the teachers will be en route or at the World's Fair. The editor of the JOURNAL started June 1, with a large party. We present this as an explanation of the fact that this number of the JOURNAL is smaller than usual.

WARREN CHENEY, who is associated at present with Prof. Allen in charge of the California Educational Exhibit at Chicago, writes under date of May 17th: "The building is much behind, but in a week most of the exhibits will be presentable. Prof. Allen is not only keeping up his work, but is the moving force in several other departments."

TEACHERS contemplating a trip to Chicago should bear the following in mind: The Special Educational Congresses at the World's Fair will commence on Monday, July 17th, of this year, and will extend to Monday, July 25th, at which date the General Educational Congress, under the charge of Honorable William T. Harris, Commis-

sioner of Education, will commence. This Congress will continue to July 28th inclusive. The Congress of Public School Authorities and Administration will be held during the week commencing July 17th.

In the volume expository of the resources of California to be distributed at the World's Columbian Exposition at Chicago, an admirable chapter on our Educational Advantages has been prepared by W. H. V. Raymond, the accurate and painstaking editor of the California State Text-books. He recapitulates as follows:

Briefly summarized, then, the educational advantages of California are seen—

1. In the unprecedented liberality and absolute adequacy of its provision for a good free school, of not less than eight months annually in every district of the State.

2. In the system which extends high school facilities to every corner of the commonwealth.

3. In the provision for excellent public school libraries in every district of the State.

4. In the economical and admirable provision for the supply of text-books to the pupils of the State.

5. In its generous provision for the instruction and training of teachers in Normal Schools and County Institutes.

6. In the magnificent and richly endowed University at Berkeley, which crowns its educational structure.

7. In the completeness of its machinery for the effective administration, by proper officers, of its whole system.

8. In its University at Palo Alto, made great by private endowment, and in the high character and large numbers of its remaining colleges and private schools.

With these gifts in her hands our beautiful State beckons to the dwellers in her sister States, and to the people of all enlightened nations, inviting them to settlement, citizenship and home.

Recent Supreme Court Decisions as they Affect School Departments of Cities.

The question of the exact legal relations of the County Superintendent of Schools to the City Superintendent, of the school department of the county to that of a city within the county, has been the subject of much discussion among school officials and teachers. The

existing condition has been acquiesced in on the general notion that the school department of a city somehow shared in the special powers conferred upon other municipal corporations.

To officials the question was one involving powers, duties and responsibilities; to the teacher the matter focused in the burning inquiry whether a certificate granted by a County Board of Education was valid in cities included within the county. In the nature of things, what is vague, uncertain and illy defined, unless sharply challenged, becomes accepted in time as real. We first acquiesce, then become accustomed to, and finally accept as established. Thus habit grows into law.

But in this case the challenge came, and on March 2d the Supreme Court rendered three decisions which leave no room for doubt. In one, the Board of Education of the City of San Diego vs. the Board of Supervisors, the court decided that Boards of Supervisors must levy school taxes in cities upon the estimate of the city Boards of Education.

In another, the treasurer of the city of San Diego vs. the county treasurer, the court declared that the county treasurer should be the custodian of the city school fund.

In the third, in the matter of an injunction to restrain the county treasurer from paying a warrant for the salary of the City Superintendent of schools, the order dissolving the injunction was affirmed.

These decisions were based upon the following propositions, briefly stated:

1. That the school system is established by the State, and is not a matter of municipal provision.

2. That each city, unless otherwise subdivided, constitutes a school district.

3. That as a school district the city is not an independent organization, but is correlated to the other school districts in the county, as a part of the system of public schools provided for by the legislature.

4. A Board of Education within a city has only the same right to make a requisition upon the Board of Supervisors to levy a tax for school purposes upon the taxable property within the city, that has the Board of Trustees within any other school district in the county.

5. That the rights and obligations of the school district corporation are to be determined by the provisions of the Political Code, and not by those of the charter of a city, and also that the powers and duties of boards of education in cities are the same as those of boards of trustees in other school districts.

And now following this declaration of our highest court the voice of the taxpayer is heard inquiring *Quo warranto?* In the case recently before Judge Ogden, in which the City of Alameda was the defendant, the court, with these decisions before it, used this language: The power and liberty of these corporations (municipal and school district) are entirely distinct and separate. The one has exclusive control and dominion over school property and the management thereof, the other has the control over that property used or necessary for "municipal purposes." And then, quoting the language of the higher court: "'Boards of Education' is but another term for 'Boards of Trustees,' to which the control of school districts has been given" (see Section 1617, Political Code.) The judge says: "It is idle to say that the legislature would rest the same power in two distinct corporations."

Not to transcend the limits assigned to this article let us sum up this interesting situation as it appears from these decisions:

1. The city of Oakland or Los Angeles (for instance) represents two distinct corporations—a municipality and a school district.!

2. The Board of Education stands in exactly the same relation to the county government as does the Board of Trustees of San Lorenzo, Redwood or any so-called country school district.

3. Special school taxes, including bonds, are to be voted and levied through the Board of Supervisors and not through the city legislative body.

4. All school moneys of a city are to be paid into the county treasury, and the employees of the school department are to be paid through the county superintendent and county auditor upon the order of the city Board of Education.

5. That a city charter cannot deprive boards of education of any powers conferred upon them by the general law.

While these clear cut and far reaching decisions may create temporary consternation and embarrassment the result in the end cannot fail to be a benefit. It is an advantage to have the fog clear off, to know just where we stand, and the direction of our path. It is a matter of congratulation to know that the State keeps in its own hands the public school system and guarantees its support and defense. It is an advantage to have the system simplified by making the county the unit. The city schools need lose nothing of their efficiency, and the equality of the districts thus established is salutary and refreshing and will tend to confirm and strengthen rather than impair public confidence in the schools.



JUNE, 1893.

J. W. ANDERSON, - - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - Deputy Superintendent of Public Instruction

THE following decisions have been rendered since the last list reported:

453. According to section 1576 of the Political Code, as amended by the Legislature of 1893, parties residing in territory which has been annexed to a city for school purposes, are entitled to vote for members of Boards of Education and of Boards of Trustees. They vote at precincts designated in their own portion of the territory, each separate portion of outside territory being an election precinct by itself. The legislative authority of the city or town designates the precincts; and the electors in the outside territory vote only for the members of the Board of Education, or Board of Trustees.

454. Educational and Life Diplomas are valid authorizations to teach in any county of the State. These diplomas need not be filed with the superintendents; nor need any certificate be filed. All that is required is that the holder of the diploma shall, when employed in any county, exhibit his diploma to the Superintendent thereof. Thereupon the Superintendent is required to record the name of the holder in his office; this will exempt from the necessity of filing any diploma or certificate.

455. A district, under late amendments to the law, does not lapse unless the average attendance for the entire school year, or term for which the school was maintained for the school year, is five or less than five.

456. A district that has less than ten census children is not entitled to an apportionment of $400 or $500; but it is entitled to a *pro rata* apportionment of money remaining after the apportionment of $400 and $500 has been made to districts entitled thereto.

457. Under the law, as amended by the last Legislature, no new school district can be formed at any other time than between the first day of December and the fifth day of April.

458. Under the law, as lately amended, no part of the State School Fund can be used for any purpose other than the payment of the salaries of teachers. No part of it can be used to pay an outstanding indebtedness for apparatus.

459. The amended law provides that all orders for books or apparatus made by Boards of Trustees must be submitted to the Superintendent of Schools for his

approval before the books can be purchased. If this is not done, the Superintend ent is authorized to refuse to draw a requisition in payment of the order.

460. If school is commenced in a new district prior to the first day of July, subsequent to its formation, it must be supported at the expense of the people of the district. No new district can have any apportionment of funds made to it for the year in which it was formed.

461. Trustees cannot issue an order for books or apparatus to exceed the amount of funds accruing to the district for the school year; if they do, the order is void as against the district.

462. An order for books or apparatus not authorized at a regular or special meeting of the Board of Trustees is null and void. No business of any kind is valid unless transacted at a meeting of the Board, of which the members have had notice.

The attention of the Superintendents is respectfully directed to an Act passed by the Legislature at its late session, found on page 56 ot the Statutes of 1893, relative to the payment of moneys into the State treasury by County Treasurers. The money retained by the County Treasurers upon the certificate of the State Controller, will be kept by them in the County Treasury until the apportionment of the State Fund is made by the Superintendent of Public Instruction in the first week of July; at which time it will be apportioned, with whatever other moneys may be apportioned to the county by the State Superintendent. If the Superintendents deem it desirable to apportion this money represented by the certificate of the Controller, and afterwards make an additional apportionment of whatever other moneys may be apportioned by the State Superintendent, to their respective counties in July, there is nothing to hinder their doing so. Some of the Superintendents have had the impression that the money represented in the certificate of the Controller, is all that their counties will receive of State Fund. This is not correct. This money represents the amount from taxes; but at the first of July the interest on investments of State School Funds will come into the State Treasury, and it will be added to the apportionment made by the State Superintendent. If any Superintendent should apportion the money represented by the Controller's certificate prior to receiving the State Superintendent's report of apportionment, he will have to deduct the amount apportioned from the amount reported, or apportioned by the State Superintendent in July, when making his July apportionment to the districts of his county.

Owing to the fact that the appropriation for the running of the State Printer's Department is almost exhausted, the State Superintendent has not been able to get the blanks and other printing done in such time as would enable him to send out all the supplies at one time. His budget of printing was in the hands of the State Printer in the proper time to have had all done had it not been necessary to reduce the force in the State Printer's Department in consequence of lack of funds. Whatever inconvenience and additional labor this may have occasioned for the Superintendents, we can assure them that it has occasioned much additional labor and expense in the State Superintendent's office. We have received numerous complaints because of the fact that the supplies have been sent out in parcels. One Superintendent, who is a constitutional growler, writes a silly letter of complaint. We are becoming somewhat after the order of the pachyderm; and if our expla

nation is not sufficient, and it is any pleasure or relief to such parties to complain, why, then, complain. We propose to do our duty. While in this position, we propose to consult the people's interest as well as the convenience of Superintendents. There has been an unreasonable waste of blanks and other supplies, not upon the part of Superintendents, but upon the part of those who ought to see to it that the property of the State is not wasted. This office has a complete record of the status of the districts of the State; we made our estimate of printing upon the strength of reports of 1892, adding for estimated increase. If supplies were given out and used as they should be, we had an abundance. In this respect, as in all others, we will exercise our judgment. "What cannot be cured must be endured." The School Law cannot be printed before July, because there is not funds enough for this fiscal year, and the State Board of Examiners decline to give an order for the printing thereof until after the commencement of the next fiscal year.

By oversight in preparing the draft of the amendments to the School Law, the fourth subdivision of section 1521 is made to read in such manner as to indicate that a fee of two dollars should accompany applications for Educational Diplomas. This was not the intention; and, as there is no expense connected with the issuance of these diplomas, it is not necessary to send any fee with such applications.

The attention of Trustees and Superintendents is respectfully called to the last clause or proviso, in section 1623 of the Law; also to the last part of subdivision first of section 1712. Complaint frequently comes to this office in regard to the imposition practiced upon Trustees by book agents. One came this week relative to an agent who obtained a curb-stone subscription from the Trustees of a primary school for a set of Johnson's Encyclopedia at an expense exceeding the amount of money in the Library Fund. This subscription is null and void as against the district for two reasons; first, because it is in violation of subdivision of first section 1617; and, second, because it is in violation of the last part of section 1623.

The attention of Boards of Education, of Trustees, and of Superintendents is also respectfully called to sections 1713 and 1714 of the Law.

Blanks to enable Boards of Education to comply with the provisions of section 1503 of the Law, as amended, will be sent out as soon as we can have them printed. Until such time, the Boards of Education can use the blank form for the recommendation for Life and Educational diplomas. It is earnestly hoped that Boards of Education will refuse to grant the recommendations provided for in sections 1503 and 1521, unless they are fully satisfied of the character of the teacher's success. These boards have it in their power to prevent the issuance of diplomas to any parties not fully meriting them. Duty to the profession demands that this should be done.

Under the ruling of the Attorney General, the State Fund to be apportioned in July is applicable to the fiscal year ending June 30th, 1893.

Some of the Superintendents seem to misapprehend the construction of the proviso in subdivision third of section 1858 of the Law. It has always been held that this proviso does not apply simply to one seventy and a fraction over seventy, but to any number of seventies and a fraction. To illustrate: If a district has 140 census children and a fraction of less than 20 census children, the district is entitled to two teachers, that is, to twice $500 and to $20 for each child in the fraction of less than 20 census children.

CALIFORNIA SCHOOL ITEMS.

B. A. HAWKINS was elected school superintendent of Madera county.

LOS GATOS decides the question of the establishment of a high school June 10th.

OCEAN DISTRICT, Los Angeles county, has voted $4,000 bonds for school purposes.

C. A. MCCOURT, of Lemoore, was elected Superintendent of Kings County at the recent election.

THE Eureka Academy and Business College, owned by N. S. Phelps was destroyed by fire May 23d.

PROF. BACON, of the State University, reports that 44 High Schools have applied to be accredited.

AN election is to be held in Colusa District to determine the question of establishing a district high school.

THERE are 1846 students attending the two great universities in our State. Of this number 451 are women.

PRINCIPAL W. W. ANDERSON, of Hopkins Academy, takes charge of the Mt. Tamalpais Academy next term.

A NUMBER of school districts in Modoc county vote on the question of establishing a union high school June 17th.

FORTUNA, Humboldt county, will have four teachers next term. A direct tax of $400 has been voted to furnish the school house.

PROF. R. H. MITCHELL, of the University of North Carolina, has been added to the faculty of the Pacific Methodist College, Santa Rosa.

THE Butte county census shows a loss of 60 children of school age. This is attributed to the absorption of small farms by the large landholders.

$16,000 is needed for the purchase of a lot, and the erection and equipment of a new schoolhouse in Castroville, and the progressive people of that town are taking steps to issue bonds for that amount.

VENTURA.—At a reception given the graduating class of '93 of the Ventura Union High School by the members of the school, Miss Annie W. Brewer, the English teacher, was presented with an elegant gold watch from the pupils. She has been loved very dearly by the pupils, and they wished to give her something by which she would remember them, as she intends going to the University of California next term, and therefore cannot teach any longer in this school.

THE reorganization of the colleges of the State University was decided upon at the meeting of the Academic Senate on the 3d of May. It combines the literary course, and the course in letters and political science, into the college of the social sciences; the classical course is continued in the college of letters; and the college of the natural sciences is created. The technological courses in agricul-

ture, mining, civil engineering and chemistry, and the professional colleges in law, medicine and dentistry, in San Francisco, remain as before. The facilities for the study of electrical engineering will be much enlarged upon the completion of the new building. The degree of Ph. B. will cease to be given after 1899 and the degrees will be A. B., B. S. and B. L., together with the degrees of the several professional colleges. In 1896 and after, two years of elementary Latin will be required for admission to the College of Social Science, in addition to the conditions in regard to English.

To Thomas E. Kennedy, who succeeded his brother James G. as Inspector of Schools in San Francisco a few years ago, and who died recently in the very prime of his manhood, the *San Jose Mercury*, pays this tribute: "Thomas Kennedy was born in Illinois March 24, 1852. When he was but three weeks of age his parents started on the trip across the plains to California, and upon arriving first located at Placerville, El Dorado county. In 1855 the family came to this county and located here permanently. Thomas attended the public schools of San Jose, and subsequently went to Illinois and attended Wheaton College, from which institution he graduated. Returning to San Jose he became connected with the public schools as an instructor, and for years served in that capacity. He was peculiarly fitted for this line of work, being possessed of a brilliant intellect, a liberal education and having the faculty of imparting knowledge to his pupils in a manner easily understood. While the best of discipline was always maintained by him, he was ever a genial friend and companion to the pupils, and by his pleasant ways greatly endeared himself to them. There are many young men and women in this city who, having been thus associated with Mr. Kennedy, will experience the pangs of sincere sorrow in learning of his death while yet in the prime of life and in the midst of a promising career.

HOPKINS ACADEMY AT BELMONT.—The new board of directors who will control the affairs of the Belmont school, into which Hopkins Academy has been absorbed, is composed as follows: President Kellogg, Warring Wilkinson, Professor J. B. McChesney, Professor Stillman, of Stanford, Charles Holbrook, of Holbrook, Merrill & Stetson, N. P. Cole, of the California Furniture Company, Senator Earl, J. K. McLean and W. T. Reid. President Reid has had at Belmont accommodations for about one hundred boys and ten teachers, the establishment covering twenty-eight acres of land. Ten acres additional have now been purchased, and the contract has been closed for constructing a three-story dormitory building to be called Hopkins Hall. This dormitory will accommodate thirty-five boys, and the building will also contain a large assembly hall and reception room. Another contract has been let for a new dining room and kitchen. There will be adopted in this school the Lawrenceville plan, which calls for a separate kitchen and dining room for each fifty boys. The new gymnasium built by Mr. Reid at an expense of $7500 will be supplied with $2500 worth of apparatus, making it one of the most complete academic gymnasiums in the country. Mr. T. G. Adams of Yale, for two years physical instructor at Williams college, has been engaged as director of the gymnasium, and daily exercise in the gymnasium will henceforth be one of the requirements. President Reid has largely recruited the faculty of the school, introducing several very strong men.

OUR LIBRARY TABLE.

MAGAZINES.

THE June number of *Worthington's Magazine* is rich in well-written leading articles of timely interest, in short stories, essays and poems, while the charming illustrations, beautifully reproduced, and the fine press work, render it as satisfactory to the eye as it is refreshing and stimulating to the mind. It is, in fact, to our mind, the best number of a magazine that has been exceptionally attractive and interesting from the start.

AMONG the readable articles in the *Atlantic Monthly* for June, 1893, are the following: The Pygmies of Africa, John Dean Caton; A National Vice, H. C. Merwin; Womanhood in the Iliad, William Cranston Lawton; Some Reminiscences of Dr. Schliemann, J. Irving Manatt; A Marine Observatory the prime need of American Biology, C. O. Whitman; The future of Local Libraries, Justin Winsor; The Hayes Administration, Jacob Dolson Cox; The Educational Trend of the Northwest, D. L. Kiehle.

BOOKS.

EPITOME OF THE WORLD'S HISTORY. By Edgar Sanderson, M. A., Cambridge; revised by John Hardiman, A. M. In two parts, neat little volumes, well illustrated and very readable. Boston School Supply Company, 15 Bromfield St.

DO you want a good supplementary arithmetic? Send for Cook & Cropsey's "Normal Course in Number." Two volumes, elementary and advanced. J. W. Cook, President of the Illinois State Normal University and Miss N. Cropsey, Assistant Superintendent of Schools, Indianapolis. Published by Silver, Burdett & Company, Boston, Mass.

LAURIE'S LIFE AND WORKS OF COMENIUS, illustrated with cuts of the great educator, a handy volume. The whole theory and practic of education distinctly set forth. A book to read and re-read and make one's self master of, for it contains the frame-work of all our educational ideals. A book for the teacher's library. C. W. Bardeen, Publisher, Syracuse, N. Y. Price, $1.

CALIFORNIA NAMES, by Chas. M. Drake, the well-known contributor to the PACIFIC EDUCATIONAL JOURNAL, a book for teachers and other curious people. The literal meaning of California names given, also other primary geography names and their meaning. Costs a trifle and every teacher should have a copy on his desk. Paper, 25 cents; cloth, 40 cents. Jones Book and Printing Company, Los Angeles, Cal.

THE Analytic Teachers' Aid in Arithmetic, by Prof. W. A. Clark, Instructor in College of Science, N. N. University. A book of exceptional value to teachers or those preparing to teach. Replete with new ideas, new methods, new helps, model solutions; a well-spring of information and inspiration for every progressive student and instructor. 12mo, cloth. To teachers, 75 cents. C. K. Hamilton & Co., Booksellers, Lebanon, Ohio.

THE present interest in subjects connected with the study of Sociology has led Professor Charles R. Henderson of the University of Chicago, to prepare *An*

Introduction to the Study of the Dependent, Defective and Delinquent Classes, which will be published about June 1 by D. C. Heath & Co., Boston and Chicago. This book is adapted for use as a text-book, for personal study, for teachers' and ministers' institutes, and for clubs of public-spirited men and women engaged in considering some of the most grave problems of society.

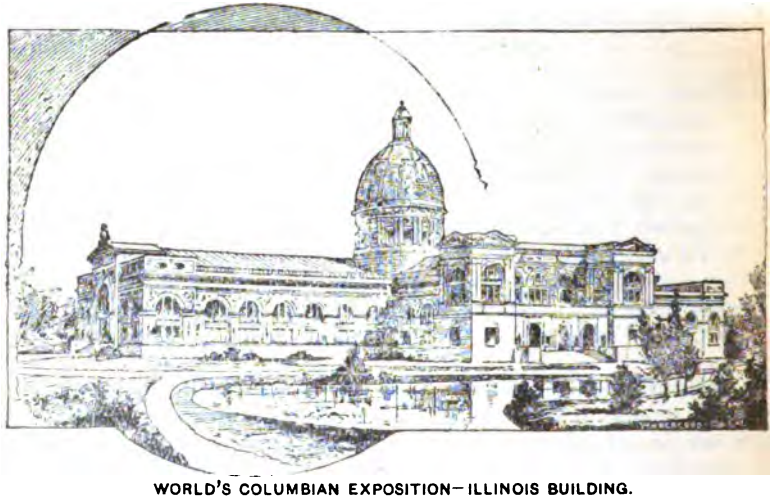
AMONG the latest works on Manual Training is Fifty Lessons in Wood-working, by Prof. Arthur A. Upham, Whitewater Normal School, Wisconsin. First there are directions how to use the most common tools, such as the try-square, gauge, hammer, saw, plane, bit, chisel, etc. Next are described operations on wood; then the construction of joints, dovetails, etc., is treated; then the miter-box, picture frames, screens, shoe-blacking stool, etc., the book closing with a valuable chapter on the selection, use and care of tools. The strong features of the book are its brevity, simplicity and clear treatment of just those points that the young student of Manual Training will need to learn. It is liberally illustrated. E. L. Kellogg & Co., New York and Chicago. 50 cents.

GEOGRAPHY BY MAP DRAWING, by Amos M. Kellogg, editor of *The School Journal.* is an exposition of the method employed by him in schools and institutes with the most gratifying results. The plan is for the teacher to draw upon the board the outlines of a State, embracing the boundaries, rivers, principal cities, etc., the pupils naming them as they appear. The work must be rapid and fairly accurate. Then other States are added, the pupils are also practiced in sketching and they rapidly learn the main features of each State and section, by having the picture of it impressed on the mind. Get this little book and follow its directions, and you will be astonished at the results. E. L. Kellogg & Co., New York and Chicago. 50 cents. Mr. Amos M. Kellogg has also made a very careful collection of songs for younger pupils, which are published in a little book entitled Best Primary Songs. Movements associated with many of these songs add zest to the singing, as marching, clapping of hands, etc. These songs are short, bright, full of nature's sights and sounds, and of great variety, both as regards words and music.

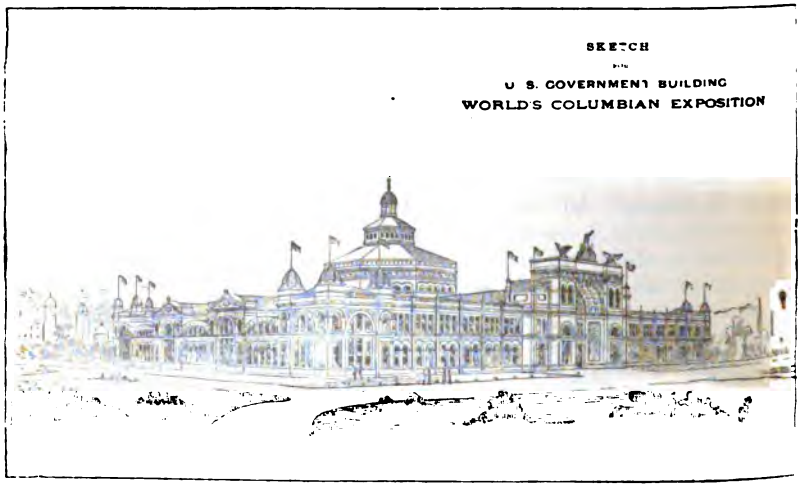
CLASSICS FOR CHILDREN. The thoughts of Marcus Aurelius Antoninus. Long's Translation. Edited by Edwin Ginn. 12mo. bound in cloth and boards. Though some may question the wisdom of putting out the Thoughts of Marcus Aurelius to be used as a Reader by children in the schools, it is hoped that many teachers may see the wisdom of placing this volume in the hands of their pupils. The principle which has governed the editor in selecting reading for the young has been to secure the best that he could find in all ages for grown-up people, believing that children like to be treated as intelligent beings, capable of appreciating a good thing. The rare generosity, sweetness and humility found in this royal philosopher are qualities alike suited to all ages.

Long's translation of the Thoughts has been given complete, though in the interest of space and economy, some unimportant portions of the biography and philosophy have been omitted.

This volume will also be issued in a compact pocket edition. Ginn & Company, publishers.



WORLD'S COLUMBIAN EXPOSITION—ILLINOIS BUILDING.



THE

PACIFIC EDUCATIONAL JOURNAL.

Official Organ of the Department of Public Instruction of California.

VOL. IX. JULY, 1893. NO. 7.

CURRENT EDUCATIONAL THOUGHT.

THE ability to leave a lasting mark on the mind and character of a pupil, is the unmistakable sign of the real teacher. And the source of this power lies not in the teacher's acquirements, but deeper in the very fiber of his character. "Words have weight, when there is a man behind them," said the prophet from Concord. It is the man or woman behind the instruction that makes the real teacher a great deal more than a mere instructor.—EDWARD EGGLESTON.

HUMANITY would be impoverished if women were to set themselves to do all that men do, as their rivals and not their helpmates. I do not attempt to adjust in any balance the gifts and graces of men and women. I only contend that they are different, and precious because they are different. I cannot compare their relative value, nor can I compare the relative value of the services which great poets and great artists render to their countrymen. But I know this: that the world is richer through the services of poet and artist alike, far richer than it would be if one were lost in the other.—BISHOP WESTCOTT, Birmingham, England.

THE great trouble is that our popular education is not really conducted in such a way as to develop intelligence. It teaches children to read (after a fashion), to spell, to write and to cipher; it also imparts a little knowledge of geography; but none of these things, as commonly taught, calls into activity in any adequate manner those powers on the due exercise of which the growth of intelligence depends —the power of observing facts, the power of accurately and faithfully recording facts, the power of reasoning correctly in regard to facts. Nor is any sufficient practice given in the important art of composition or correct expression in writing.—PRESIDENT ELIOT.

THE character of school supervision must be changed. The day has come when the work of the superintendent must be to teach his corps of teachers the science of education and train them in the art of teaching. Expert supervision in this sense will be the supervision of the future. The actual direction of school work in these lines has been delegated to the assistants, and the superintendent spends his time in doing cheap clerical work in attending to "odds and ends." The superintendent's energy ought to be expended in teaching pedagogics. He ought to throw his main strength into the teacher's meeting. It is here that he can effectively reach the schools.—SUPERINTENDENT T. M. BALLIET, Springfield, Mass.

AT present there is great danger of undue emphasis upon manual training. The time is short enough for teaching the other branches. Manual training should form no material part of the curriculum of the modern primary or lower school. It is a shame for a child to sacrifice his precious school days to mere manual dexterity. If the hand differentiates man from the monkey, it must not be forgotten that it is still the mind that makes him man. I have no hesitancy in clinging to the old gospel of head training instead of the modern evangel of hand training.—PRESIDENT I. G. SCHURMAN, Cornell University.

IT is not my desire or wish that my boys should go through college, but that they shall receive an education which will fit them for a commercial life. Should either of them choose to be a lawyer, doctor or clergyman, however, after full determination to be honest in his profession, I consent to his having a collegiate education to that end and effect. I prefer that they should learn a mechanical trade which will enable them to earn an honest livelihood under any and all circumstances. I request of my children that they will never use tobacco in any form, drink a glass of liquor, wine or any other intoxicating drink, or play any games for money, as their father has had experience sufficient to serve for all his posterity.—Clause in the will of "UNCLE" RUFUS HATCH, of New York Stock Exchange fame.

ORAL instruction, except as an auxiliary to the text book—except as an incitement to the pupil's interest and a guide to his self-activity and independent investigation in the preparation of his next lesson—is a great waste of the teacher's energy and an injury to the pupil. The pupil acquires a habit of expecting to be amused rather than a habit of work and a relish for independent investigation.—WM. T. HARRIS.

THE science of unfolding the human mind is the grandest to which human energy can devote itself. The art of developing true manhood and true womanhood is the noblest that challenges thought. Educators are true kings and queens.—MRS. SARAH B. COOPER, at International Kindergarten Union, Chicago.

THERE is no more responsible educational office in the state than the office of school trustee. On the trustee depends the success of the school. His good or bad judgment selects the teacher, buys everything, expends the school money and creates harmony or discord in a district. He is a support, an aid to the teacher, or he is in the way. —SUPT. JOB WOOD, JR., Salinas, Cal.

THE most useful college professors are those who have cultivated the closest acquaintance with public school men. We can name more than one college which owes its prosperity in no small degree to the fact that certain officers have taken pains at all times to post themselves regarding every phase of educational work. We do not believe that the college professor who shuns or neglects association with teachers who are laboring in other fields, does justice to his profession, his college or *himself*.—Editor of *Schools*.

I HAVE always regarded it as an error, both in principle and in tactics, to advise women under all circumstances to demand the same wages for the same work as men. The London School Board pays its women teachers less than its men teachers, but the number of women applying for the positions is considerably in excess of the number required; whereas it is, I am told, difficult to get men enough to fill the vacancies for male teachers. The cry, "The same wages for the same work," is very plausible, but it is proved to be impossible of achievement when the economic conditions of the two sexes are so widely different.—MRS. MILLICENT G. FAWCETT, in *The Economic Journal*.

THERE is more fraud masquerading in the disguise of education than most teachers are willing to admit. I do not know of anything more deceptive to the parent and the public generally, and more disastrous to the minds of pupils, than the so-called "exercises" which the children are put through in so many schools on every occasion on which there are visitors to the school or on which the school appears before the public. This "show work" is generally fraud work of the rankest description, so far as its bearing on education is concerned, and yet how large a percentage of our "popular" teachers secure and maintain their popularity through this sleek humbuggery, the practice of which is defrauding thousands of children of their birth-rights to an education!—A. MEGAHAN, Oakland, Cal.

GENERAL DEPARTMENT

To the Educators.

OLIVER WENDELL HOLMES.

[At a reception of authors and publishers tendered the Department of Superintendence at Boston, February 23, 1893, Dr. Oliver Wendell Holmes read the following delightful verses, prefacing them by a few explanatory words. "These little verses which I have written, and which I am going to read, are impromptu. They did not exist in word or shape before 10:30 to-day. If I can read them I will. I was hardly able to get into the coach at half past one, my hand shook so, and I was like a demented person. But I hope I shall like them myself."]

Teachers of teachers! Yours the task
Noblest that noble minds can ask.
High up Aonia's murmurous mount,
To watch, to guard the sacred fount
That feeds the streams below:
To guide the hurrying flood that fills
A thousand silvery rippling rills
In ever-widening flow.

Rich is the harvest from the fields
That bounteous nature kindly yields;
But fairer growths enrich the soil
Plowed deep by thoughts and wearied toil,
In Learning's broad domain.
And where the leaves, the flowers, the fruits,
Without your watering at the roots,
To fill each branching vein?

Welcome! the Author's firmest friends,
Your voice the surest Godspeed lends.
Of you the growing mind demands
The patient care, the guiding hands
Through all the mists of morn.
You knowing well the future's need,
Your prescient wisdom sows the seed,
To flower in years unborn.

The Value of History in our Public Schools.

BY E. B. WARMOTH, TEHAMA COUNTY, CAL.

The greatest value of History to children is that it may be made a useful means of training their moral judgment. In the hands of a

good teacher, no study can compare with it in this respect. You can not read or teach about famous men or deeds without being called upon to exercise a moral judgment, and your pupils are in the same situation. Take a few events in the life of Napoleon, for instance.

When he left opium within reach of his plague stricken soldiers. Two hours would have seen them slaughtered by the Arabs, or two days would have seen them dead from the plague. Was he right or wrong? Again his shooting of prisoners at Jaffa. They had been released on condition not to bear arms against him; they had broken their promise and had been recaptured. He could not properly feed his own army. Was he to feed these Arabs, or was he to set them free to fight against him again?

Take again the Duke of Wellington—the English idol. He could have prevented the death of Ney by raising his finger. How about Washington? We know he hesitated long before signing the death warrant of Andre—a traitor's accomplice. In a case where Washington distrusted himself there is good room for study and caution on our part. Set the children to looking up the facts in such cases and help them to pass on them correctly. In so doing, you will be doing them good service. The history of no state furnishes better material for this kind of work than does the history of California. Perhaps no state has been the scene of more heroic and—well we might say unheroic deeds.

There are teachers in California who from indolence or from ignorance of a better way profess to teach history by assigning a lesson from the text-book, which shall be recited from memory in the very words of the book. Excepting so far as it trains the memory such recitations are utterly valueless. It arouses no dormant faculty; it does not in any way help the child to assimilate his mental food. After "going through the book" the scholar knows nothing of his country's history. The Pilgrim Fathers, with their heroic devotion to principles, have not strengthened his moral nature. The Revolutionary heroes, giving their lives for their country, and the "Boys in Blue," stamping out rebellion, have planted in his mind no germ of patriotism. These characters are to him dim shadows of the past, less real by far than Robinson Crusoe and Peck's Bad Boy.

No pupil who studies History as a simple recital of past events or a narrative of great names and dates, will receive from it any inspiration whatever for life, for active participation in *to-day*. The pupil that sees in it the cause of the rise of this state and the fall of that one

will be fitted himself to read the signs of our own age. Whoever learns in American history about the difficulties that attend the drawing up of any constitution for our nation at its birth, will understand why to-day there is need of various adjustments in the national organization, to meet the needs of our broad empire. We cannot afford to crowd into the background a study that presents such practical lesson to our future voters. There is too much at stake.

In his admirable lectures on teaching, Fitch says, "These two objects will be before you: *first*, to make history stimulating to the imagination and suggestive to the thought of the child; and *second*, to furnish a good basis of accurate and well arranged facts for future use and generalization.

To care about the first object exclusively is to incur the risk of a relapse into slovenly teaching and vague, picturesque impressions. To be satisfied with the second only, is to incur the yet greater risk of turning the most interesting and humanizing of all studies into a dull and joyless mnemonic, and so giving your pupils a dislike for history which will last for life.

How are these objects to be attained? If we are to give our scholars "a good basis for future generalization, we must evidently give due prominence to those facts which have had the greatest influence upon our national life. You need not be reminded of how defective our books are in this respect. Fact after fact is given with strict attention to their chronological order, but with little, if any, attention to the order of their relative importance." Some minds may be able to retain them all, but these are exceptions. The teacher, then, must select beforehand the facts he intends to give to his class. The minor facts should be grouped around some central or leading fact. In making the selection it should be constantly borne in mind that it is not at all necessary that a scholar try to carry out into the world all the facts contained in his history; but that it *is* necessary that he acquire a taste for historical reading and that he have the power to study the subject systematically. In making the selection, the text-book will not be of any special service but is more likely to be a hindrance. Various methods of presenting the selected facts to the class will naturally present itself to the different minds. Each one will best accomplish this in his own way, and what will be a success with one class will not necessarily be the best plan to adopt with another class.

Weeks have been spent in our schools going over the dry details of the Revolutionary War, and yet scarcely a member of the class had

a clear idea of the manner in which the war was carried on. This waste of time might very easily have been avoided, if we had drawn an outline map on the board and traced the movements of the opposing armies, marking position of a few of the most important battles of each campaign, requiring each pupil to make a *fac simile* of the same on large sheets of paper. Other plans will suggest themselves. Whatever plan is adopted, constant reference should be made to the map, especially if the map is drawn and filled in from time to time by the scholars themselves, which will be more interesting and less confusing than an ordinary map. The facts to be memorized and the dates to be learned should be gone over with the class, commented on, and made interesting before being assigned as a lesson. When thus invested with interest, and not before, they should carefully and thoroughly be prepared, and should be frequently reviewed, so as to fix them in the mind.

But while demanding this of the class we cannot too firmly impress upon our minds that facts and dates are not history. They are the dry bones of history, which, breathed upon by the skillful teacher, fit together bone to bone; and being clad with flesh and skin, live forever in beauteous form. It is thus that history is made stimulating to the imagination and suggestive to the thought of the pupil.

To accomplish this we must read extensively, and must lay our reading under contribution to give life to our instructions. He who depends for his knowledge of United States history upon text-books alone is not prepared for the classroom. I do not wonder that such an interesting subject is made dull; and that students during history recitations, never kindle into enthusiasm, produced by a vivid picture of the difficulties, hardships and sacrifices of those who laid deep and strong the foundation of our government and our civilization. By sharp questioning and an influence over the class the teacher may keep the scholars on the alert. Attention may never flag, and yet the instruction may only store the mind with facts, which, in themselves, have no germinating power. No matter how thoroughly the book work is memorized, such knowledge of history is only superficial. It will not "grow when the pupil carries it with him into the world of books and news and of conversation," nor "will it furnish material for reflection in solitary hours."

This "germinating power" can be imparted by the teacher, and in no other way. It is this which distinguishes the teacher from the

hearer of recitations; and since our available text-books are at best, collections of dry bones, all the more urgent is it that we discharge *our* functions as workmen who need not be ashamed of our work.

An English teacher, Miss A. C. Graham, has taken a prize offered by the *University Correspondent* for the best collection of pupils' blunders. She vouches for them all as literal copies of the originals, and explains that she was led to set about their collection by reading one day the surprising statement that "Ilaied and Odessae translated Euripides." The *Youths' Companion* gives a few of the choicest gems of her collection, in some of which the outcropping of the English idea that all history converges on the British Isles is almost startling:

Esau was a man who wrote fables and who sold the copyright to a publisher for a bottle of potash.

The Jews believed in the synagogue and had their Sunday on a Saturday, but the Samaritans believed in the Church of England and worshiped in groves of oak, therefore the Jews had no dealings with the Samaritans.

Titus was a Roman Emperor—supposed to have written the Epistle to the Hebrews—his other name was Oates.

Oliver Cromwell was a man who was put into prison for his interference in Ireland. When he was in prison he wrote "The Pilgrim's Progress" and married a lady called Mrs. O'Shea.

Woolsey was a famous general who fought in the Crimean War, and who, after being decapitated several times, said to Cromwell: "Ah, if I had only served you as you have served me, I would have not been deserted in my old age."

Perkin Warbeck raised a rebellion in the reign of Henry VIII. He said he was the son of a prince, but he was really the son of respectable people.

The heart is a comical shaped bag. The heart is divided into several parts by a fleshy petition. These parts are called right artillery, left artillery and so forth. The function of the heart is between the lungs. The work of the heart is to repair the different organs in about half a minute.

Explain the words fort and fortress: A fort is a place to put men in, and a fortress is a place to put women in.

Hydrostatics is when a mad dog bites you. It is called hydrophobia when a dog is mad, and hydrostatics when a man catches it.

METHODS AND AIDS.

Regula Falsa, or Numeratio Divinationis.

A RULE FOR SOLVING EQUATIONS WHICH INVOLVES NO PREVIOUS TRANSFORMATIONS WHATEVER.

BY M. LIPOWITZ, SAN FRANCISCO.

Owing to the regrettable fact that modern algebraists have strangely neglected one of the ancient Hindoo methods for solving "numerical equations of the first degree containing but one unknown quantity," *regula falsa*, or better, "the rule of the two errors," is unknown to text-books on algebra.

It is the object of this paper to introduce that method, and to show that, since we are familiar with zero and negative numbers,—quantities but vaguely understood or absurdly misunderstood in the time of Bhaskara (the Hindoo astronomer, born in 1114, to whom we can trace the application, if not the origin of the method),—the rule may often be advantageously employed.

In mathematics, as Newton has said, "*exempla magis prosunt quam præcepta;*" let the following examples, therefore, teach both the method and its usefulness:

EXAMPLES.

1. $11x - 6 - 4x = 7x - 9 - 3x + 5$

$1 = 0 + 1$ ....., Error [for $x = 1$]

$8 = 4 + 4$ ....., Error [for $x = 2$]

$$x = \frac{1 \times 4 - 2 \times 1}{4 - 1}$$

$x = \frac{2}{3}$.

EXPLANATION 1.—Assume for x *any two values you please*—say, $x = 1$, and $x = 2$; which substitute for x successively in the given equation.

For $x = 1$, the first member becomes,

$11 - 6 - 4$, or 1; and the second member,

$7 - 9 - 3 + 5$, or 0; whence, $1 = 0$; which absurd equation you correct by adding *the (first) error*, 1.

For $x = 2$, the first member becomes,

$22 - 6 - 8$, or 8; and the second member,

$14 - 9 - 6 + 5$, or 4; whence $8 = 4$; which absurd equation you correct by adding *the (second) error*, 4.

And finally, when, as in the present case,

Both errors are additive, or when, as it may happen,

Both errors are subtractive, you divide the *difference* of the following two products; to wit,

(*Assumed*) *first* value of x times *second* error, and

(*Assumed*) *second* value of x times *first* error, by *the difference of the errors.*

REMARK 1. A little practice will enable you to express the solution directly in this summary form,

$$1 = 0 + 1 \times 1$$
$$8 = 4 + 4 \times 2$$
$$x = 2\tfrac{2}{3}.$$

2. $\frac{x}{2} - \frac{x}{3} + \frac{x}{4} - \frac{x}{12} = 11 - \frac{x}{6}$

$$0 = 11 - 11 \times 0$$
$$4 = 9 - 5 \times 12$$
$$x = \frac{11 \times 12 - 5 \times 0}{11 - 6}$$
$$x = \frac{11 \times 12}{6}$$
$$x = 22.$$

EXPLANATION 2.—Assume $x = 0$, and $x = 12$; the resulting errors, 11 and 5, are both subtractive. The product 5×0 does vanish, leaving 11×12 to be divided by the difference of the errors, $11 - 5$, or 6.

REMARKS 2. The respective signs, *plus* or *minus*, placed before the errors, in every case are to be considered but *symbols of addition or subtraction*, the errors themselves not being affected by the signs; hence, you subtract 11 and 5; you do not add -11 and -5.—Note that the "crossed lines" point to, or connect the "factors" of "the two products."

3. $18x + 16 - 10x = 14x + 30 - 42x$

$$20 = 16 + 4 \times \tfrac{1}{2}$$
$$16 = 36 - 14 \times 0$$
$$x = \frac{14 \times \frac{1}{2} + 4 \times 0}{14 + 4}$$
$$x = \tfrac{7}{18}.$$

EXPLANATION 3.—Assume $x = \frac{1}{2}$, and $x = 0$; the *first* error is *additive*, the *second substractive*. Now, whenever the correction of the errors is made by respective addition *and* subtraction, you must divide *the sum of the products* by *the sum of the errors*.

4. $\frac{2(7x - 10)}{3} - 20 = \frac{50 - x}{2}$

$$-8 = 23 - 31 \times 4$$
$$48 = 17 + 31 \times 16$$
$$x = \frac{31 \times 16 + 31 \times 4}{31 + 31}$$
$$x = \frac{31 \times 20}{31 \times 2}$$
$$x = 10.$$

EXPLANATION 4.—The substitution in the given equation of your assumed first value, of $x = 4$, realizes *whole numbers*. In order to assure a like desirable result, you assume as second value of x a suitable multiple of the first; to wit, $x = 16$.

Not recognizing negative numbers, but subtractive ones only, the term "*minus 8*" (resulting from the substitution of 4 in the place of x) simply means 0—8. Subtracting, then, from 23 the sum of 23 and 8 (or first error 31), you realize $0 - 8$.

For "signs" between "products" and "errors," see Explanation 3.

5. $\frac{5x}{6} + 14 = \frac{7(12 - x)}{2} + 2x$

$$14 = 42 - 28 \times 0$$
$$19 = 33 - 14 \times 6$$
$$x = \frac{28 \times 6}{14}$$
$$x = 12.$$

6. $$68 = \frac{x}{2} - \frac{x}{3} - \frac{x}{4} - \frac{5x - \frac{5x}{3}}{10}$$

$$68 = 0 + 68 \quad \times \quad 0$$
$$68 = 17 + 51 \quad \times \quad 12$$
$$x = \frac{68 \times 12}{17}$$
$$x = 48.$$

7. $$(x + 5)^2 - (4 - x)^2 = 21x$$

$$9 = 0 + 9 \quad \times \quad 0$$
$$27 = 21 + 6 \quad \times \quad 1$$
$$x = 3.$$

8. $$5(x - 2)^2 + 7(x - 3)^2 = (3x - 7)(4x - 19) + 42$$

$$83 = 175 - 92 \quad \times \quad 0$$
$$33 = 102 - 69 \quad \times \quad 1$$
$$x = \frac{92}{23} = 4.$$

9. $$\frac{3(3x + 1)}{5} - \frac{7x - 15}{6} - 1 = \frac{x - 1}{2} + \frac{x - 3}{3}$$

$$4 = 1 + 3 \quad \times \quad 3$$
$$23 = 26 - 3 \quad \times \quad 33$$
$$x = \frac{3 \times 33 + 3 \times 3}{3 + 3}$$
$$x = \frac{3 \times 36}{6} = 18.$$

It is easy to prove, algebraically at least, the universal truth of the rule. The demonstration, moreover, will disclose that there is *one* form of the given equations (and one only) where "regula falsa" applied must prove regula *falsa* indeed,—*when* x *appears in the denominator.*

10. $$\frac{8}{x} + \frac{2}{5} = \frac{9}{x} - \frac{1}{10}$$
$$8 + \frac{2x}{5} = 9 - \frac{x}{10}$$

$$8 = 9 - 1 \quad 0$$
$$12 = 8 + 4 \quad 10$$
$$x = 2.$$

EXPLANATION 5.—Clear the equation of fractional x, and apply the rule.

Related Work in the Primary.

AGNES STOWELL, SAN BERNARDINO, CAL., IN *Popular Educator.*

What we want in our language work is to have the children perceive and try to tell what they perceive. And they'll try with all earnestness as soon as they really see something.

How the world of flowers will broaden out for them after they have examined carefully a few !

No longer like Peter Bell, to whom

"The primrose by the river's brim
A yellow primrose 'twas to him
And it was nothing more."

No, indeed; the fields will be peopled by his friends. Our young student knows why the cow doesn't eat buttercups, where to find the earliest spring blossoms, and where autumn lingers latest in the woods.

Not only does he know, but he is willing to tell you, his sisters, cousins, and his aunts, of his discoveries.

O yes, he thinks and talks—but the mechanics of language, the written paper—the paragraph !

Have him talk in paragraphs. If your questions are well aimed, the first year pupils will talk in paragraphs and show less inclination to wander from the subject than do some pupils of a larger growth.

For oral work in the second, third and fourth years, the outline may be placed on the board and each pupil be permitted to give a paragraph.

For written work in the first and second years the teacher must write on the board sentences for the pupils to copy. In the third and fourth they can work independently from the outline on the board. In all this work, capitalizing, punctuation, and paragraphing are taught incidentally for the most part:

From the teacher who makes use of the ordinary tasteless literature found in the usual school reader, we hear the complaint, "It is so difficult to get my pupils to read naturally. I can't even get them to call words readily."

Little wonder! Is there anything to interest an active mind in "Drive the cow, Ned. Let the cow eat grass," etc., or is there any incentive to learn those stupid words in the "cow lesson," when the next page presents the thrilling and ennobling "Is it a dog? No, it is a fox."?

Can any one in his right mind expect the pupils to read in a natural and expressive manner the unnatural and stupid "See my nag," of the reading book.

"What's Hecuba to him, or he to Hecuba,
That he should weep for her?"

"Oh, no," you say, "but I prepare every one of the children's reading lessons. We talk about the lesson first, so that the children are interested. We had the dearest little lesson about the girl and the cat. They told me all that they saw in the picture."

True, my friend. But did that lesson lead them to observe cats more closely, or prepare the children,—save in facility in pronunciation—for the next lesson, which is about "Ann feeding the hens?"

What are we to do?

Do as we are doing in San Bernardino.

Science leads. The children are taught to use the senses which best help them to study the object presented.

They feel the soft feathers of the owl, and the thick, oily feathers of the duck. They pull up the dandelion by the roots. How the ground gives way to the force of the eager little fingers! This is living!

Give a child a lesson on bees to read. He knows the different parts of the bee, for he has seen and talked about them. You killed the bee by putting it into yonr cyanide jar. It was gently done. They have watched as near to the hives as was possible to see the bees at work. They can't see all they would know.

Into their hands put Julia McNair Wright's "Seaside and Wayside." Maybe they won't know all the words. How they'll dig for those they don't know. When it comes to the royal battle of the queens, how that lesson will *go!* No need in that chapter to pause for *natural expression.*

We never have to criticise a child for lack of expression when he tells us about the runaway horse or the wild geese that are flying over the school-house. He is interested in *them.*

Fred has asked to stay after school to help the teacher get tomorrow's letter sewing cards in readiness, and to hand her stencils

while she makes word cards. He has enjoyed the hour alone with the teacher. When he says, "Good-night, Miss Gentle, I do love to stay after school to help you," could any elocutionist by turn of voice better convey to the teacher the measure of the lad's pleasure?

Secret of it—the boy feels what he says.

Now, if our young student of science reads with interest and feeling, and has enthusiasm enough to *dig* for the words he doesn't know, are not our bugs, birds, and blossoms "*worth the while*" for our reading work?

Not only "worth while," but have we any right to withhold from our young people this means of growth, and to insult the intelligence of our six-year-old students by putting before them the usual first reader *trash?*

"See the boy and the dog! The dog can run!"

Is it any wonder detective stories and silly love tales are enjoyed by our young people when we help to lay the foundation for weak, thoughtless reading by the pernicious trash we *first year* teachers give our children while teaching them to read?

A New Way to Work an Old Problem.

BY A. E. G.

One day last month some one resurrected the old question:

If a man and a half earn a dollar and a half in a day and a half how much will half a man earn in half a day?

The reappearance of this tricky old acquaintance provoked a smile. The pupils, (6th grade), looked puzzled, but the teacher said:

"This is a very easy problem which any of you can solve by a line of careful reasoning, but if you attempt to cut across lots you will soon be lost.

"Since this is not exactly a puzzle, I will, with your help, solve it, for the sake of the close reasoning which will be required. The only good that you will get out of this will be due to the effort that you, yourself, make.

"Don't hurry, but work rapidly and carefully. If you can become a systematic thinker you have come into the possession of that which will be of the utmost value to you through all your life. But close thinking and accurate reasoning require the exercise of will and determination on your part. Be sure you are correct in every step you

take. You may now try the example without any other suggestions from me."

A great variety of answers was the result. "I knew you would hurry and be wrong. The first answer given was 50 cents. Wrong, but not without value. Let us apply this answer:

"Assuming that half a man in half a day does earn fifty cents, let us substitute that amount in the problem and retrace our steps:

"If half a man earn fifty cents in half a day, a whole man would earn a dollar in half a day, and two dollars in a whole day. If one man earn two dollars in a day, a man and a half will earn three dollars in one day, and a man and a half will earn four dollars and a half in a day and a half. But the problem says that they earned only a dollar and a half. Now four dollars and a half are just three times one dollar and a half. The fifty cents, therefore, which was given as the answer is just three times too large. One third of 50 is 16⅔ cents, the correct answer.

"Now follow the same line of reasoning which we have just used, but substitute 16⅔ cents instead of 50 cents and you will find that the correct result will be obtained.

"This is a new way to solve an old problem given for the sake of the reasoning involved.

"Now try the ordinary solution and see how much better you understand the problem and all its conditions:

"If a man and a half earn a dollar and a half in a day and a half, a man will earn a dollar in a day and a half or two-thirds of a dollar—66⅔ cents—in one day. Half a man working half a day would be equal to a man working one-fourth of a day. If, therefore, the man earns 66⅔ cents in a day, half a man will earn one-fourth of 66⅔ cents or 16⅔ cents in half a day. Be sure to observe the line of reasoning in this solution also.—*Push.*

Is It Teaching?

I played the rôle of visitor in an intermediate department of a city school not very long ago. I am well aware that one teacher is never especially delighted to see another in this character, as criticism, not always just or kind, is the general result. I do not, however, intend to pose as critic. The teacher is a popular one, and if her methods mystified me it is possibly due to my inability to comprehend. That I will leave for others to decide.

The recitation was from the second reader, the class reciting from their seats. "Who can read the first sentence?" queried the teacher. Several hands were raised and one of the brightest was called upon.

"Mary is going to make some tea," she read, very nicely.

"Very well," said the teacher. "Now who else can read it?" Another volunteered, then another, until a number of the best pupils had read the words. By this time the remaining ones had learned the words from hearing them repeated. They too raised their hands.

"Mary is going to make some tea," repeated one very fluently, with eyes on the wrong page and fully as much comprehension of what the words looked like as had the desk before her. Another and another did the same thing, looking at the teacher, the visitor, anywhere, everywhere but on the book. The next sentence was taken up in a similar manner, and so on until the word lid occurred.

"Who can tell me what that means?" "A cover," was the reply from all. "But what is a cover?" "The top part."

"Is the cover always the top part?" Here followed a long discussion or tossing of meaningless phrases back and forward, during which the children's minds became most thoroughly tangled and the knowledge derived was too miscroscopical for the puzzled observer to discover. It was fairly demonstrated that the children knew what a lid was from the first. They knew the same at the end. Again the sentence reading was taken up with discussions here and there on just as important words until the lesson was finished. Result: perhaps five scholars had read intelligently, twenty had repeated the words, did not know where to find them, and as for knowing them again—!!!

Were they going through the book this way? If so, what would the twenty know in the end? Was it a "show" recitation especially for visitors? Certainly had I not been a close observer and watched the eyes and faces of those pupils, the reading might have sounded very brilliant. But being a teacher, I went away with the conviction that of two evils I should much prefer the uninteresting but hard working way of years gone by.—*Exchange.*

Pointing Off.

In multiplication and division of decimals, the great bugbear to the young student is in pointing off; and yet, few appreciate the greatness of the error in misplacing the decimal point. How often we hear a pupil say, with some complacency, "my figures were all right,

I only made a mistake in pointing." He seems to forget that the smallest possible mistake in pointing gives a result which is further from the truth than any error in the figures that one is ever likely to make.

At the outset of the work, pupils may be led to see the reasons for pointing off as we do, by a few examples clearly analyzed. Let the following illustrate:

Teacher. "John, read the first example."

John. "Multiply 7.5 by 8."

T. "Read the multiplicand as one figure."

J. "Seventy-five tenths."

T. "Find 8 times 75, and give result."

J. "600."

T. "Of what kind was the 75?"

J. "Tenths."

T. "What kind is the 600?"

J. "Tenths, because the product must be like the multiplicand."

T. "600 tenths equals what whole number?"

J. "60."

T. "Charles may read the next example."

Charles. "Multiply .75 by .3."

T. "Can you state the problem in simple language."

C. "Take three tenths of seventy-five hundredths."

T. "Good. How will you indicate one-tenth of seventy-five hundredths?"

C. "By moving the figures one place to the right, thus, .075."

T. "What have you to do now?"

C. "Take 3 times the .075."

T. "Write the result."

Charles writes .225.

T. "James may read the next example."

James. "Multiply 4.25 by 1.6."

T. "Read again; do not say 'multiply' and read each factor as one number."

J. "Take sixteen-tenths of four hundred and twenty-five hundredths."

T. "Good. Find the result and write it."

James writes 6.800=6.8.

T. "Henry may read the next example."

Henry. "Multiply .15 by .3."

T. "Henry, find the answer in the same way that we have found the others, and write the result."

Henry writes .045.

T. "Why do you write the zero, as you do?"

H. "Because zeros must be used to fill all places that would otherwise be vacant between figures and the decimal point."

T. "Correct. Now, boys, examine these four examples and see if you can discover how the number of decimal places in the product compares with their number in the two factors."

Charles. "I find that in every case the number of decimals places in the product equals the number in the multiplicand plus the number in the multiplier."

T. "Very well. Now, boys, when you go to your seats, think over carefully the way in which we have wrought these examples, and see if you think that what Charles has just said will be true in every example of the multiplication of decimals. You may also tell me to-morrow, if the rule given in the multiplication of common fractions would lead to the same conclusion that Charles has stated, if you should treat decimals as common fractions."

Remark. It will be noticed that, in this exercise, "mixed decimals" are treated as simple numbers. This is usually the best way. Never regard the decimal point as a "separatrix," as it used to be called in the old arithmetics.—*Public School Journal.*

Incentive to Study.

EVELYN S. FOSTER.

The following scheme to promote study was suggested to me in sport by a friend: Read to your pupils an account of some of the old chariot races, then say: "Now scholars, we will have a school-room race. Every one whose written spelling is correct to-day shall have his name placed on the blackboard with a bright inch line beside it. Each day the lesson is correct an inch shall be added, the difference in color showing the gain. The end of the board is the goal. Who will reach it first?" If the class is strong in spelling, but weak in arithmetic, let examples furnish the ground for a race. If discipline is the teacher's difficulty, let the inch mark a perfect day or perfect week in deportment, regardless of lessons, for when the deportment is good it is generally because attention has been given to the studies

and an interest awakened in them, and in that case a child might be excused for a failure.

Although the thought of this scheme came to me from the joke of a friend, it seems to me well worth trying. "Many a true word is spoken in jest," and many a good word too.

A Play in Words.

Here is a play which affords a field for quick thinkers and good spellers, and gives slow thinkers and poor spellers a chance to improve by practice. It is an exercise, moreover, likely to increase one's vocabulary of words, and so increase the gift of language by testing it. It was given as a puzzle by the students at the Boston Institute of Technology.

Two words are given of an equal number of letters, and the problem is to change one to the other by altering one letter at a time of the first so as to make a legitimate English word, continuing the alterations until the desired result is attained, and accomplishing this with the smallest number of changes.

The conditions are that only one letter shall be allowed to form each new word, and that none but words which shall be found in English dictionaries shall be used. Here are some examples of the changes:

East to West.—East, vast, vest, west.

Dog to Cat.—Dog, cog, cot, cat.

Soup to Fish.—Soup, sour, pour, pout, post, past, fast, fist, fish.

Road to Rail.—Road, goad, goal, coal, coil, toil, tail, rail.

Milk to Hash.—Milk, milt, mist, mast, mash, hash.

For Primary Arithmetic.

An exercise in primary number teaching that has been tested with remarkable success is that of story telling. The teacher may begin a story, introducing every now and then combinations of numbers which are recorded upon the board when mentioned; after getting the pupils interested in the story, let them use their imagination at any point to direct the course of the story. The combinations on the blackboard will serve as a guide to recall it. There are many benefits resulting from such an exercise. Besides being an excellent number lesson it serves as a language lesson and the children are acquiring a habit of

continuous attention which single concrete examples cannot accomplish; they forget their surroundings in their interest in the story and throwing off the restraint give full play to their powers.—*Shutt's Hand-Book of Arithmetic.*

School Entertainments.

For the ordinary school entertainment—singing, recitations and dialogues, wholly apart from the regular work of the school, there is no place—at least, there *should* be no place. Such exercises are more harmful than beneficial. They are harmful in that they invariably take time and strength from pupils and teachers which is needed for good straight class work. They do further damage by cultivating an undue degree of pride in some few pupils who perhaps recite or sing better than the others.

Shall we then have no entertainments in our schools? I hear asked by dozens of voices. Certainly we should, but three things should be laid down as principles to govern in getting up such exercises: First, let the programmes invariably grow out of the school-work; second, avoid mixed programmes, excepting as you use music to add variety; third, make the exercises general. Have all the pupils take some part, no matter how small.

Let me explain what I mean by letting the exercise grow out of the school work. For instance, a class, or several classes, have been working up some author, say Longfellow. Of course, in this work essays have been written on several subjects naturally suggested by Longfellow and his work. Inspire and train your pupils to do their best, and then, as you correct the compositions, select two or three of the most interesting ones and have them laid aside to be read at your entertainment. Long and short quotations, too, must have been committed, some long enough to make good recitations, and you have found out those who deliver best. The stories of the longer poems have been discussed and perhaps reproduced—some of these also can be nicely used. Now arrange your programme, adding a few pieces of music, and to your surprise you will find you have enough to make a most interesting afternoon *and all from your school work, too.* The quotations make a valuable part of the exercise, for by using them you can make the entertainment general instead of having it confined to a few pupils, as is usually the case in school exhibitions. By an unmixed programme I mean, if you plan to have a literary entertain-

ment, let it be that all through, and not part literary, part historical, and part *nothing*, that is, made up of comical recitations that are worse than nothing, for they take time and give no valuable returns, either to the one who recites or to those who listen.

Historical entertainments are very satisfactory. They may be made up from the United States history work, or in more advanced grades, from periods in general history, or from English history.

After using Lamb's "Tales from Shakespeare" for supplemental reading it is an easy matter to get up, not only one, but several interesting programmes. And here, as in Longfellow, it is not necessary to go outside of the author even for the music, for Shakespeare's songs are almost as famous as his plays.

Parents, you will find, will enjoy this sort of entertainment too, and be proud to see a bit of their children's work so advantageous displayed—a choice bit to be sure, but a part of your every-day work nevertheless.—JENNIE E. KEYSER, in *Popular Educator*.

STATE UNIVERSITY.

The Financial Committee of the Board of Regents of the State University recommend that the Legislature be asked for $500,000 next session, which is necessary for the further accommodations of pupils, the erection of a large and substantial administration building with an assembly hall, a museum and other adjuncts. The figures submitted show that the regular appropriation was insufficient to cover the expenses of the University during the last year. Prof. Hilgard and family have returned from their European trip, and the professor will be ready to take charge of his department again at the opening of the next term.

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

COUNTY SUPERINTENDENT KIRK, of Fresno, in reply to some criticisms in regard to the failure of Fresno county to make an educational exhibit, has the following explanation:

"I am perfectly willing to accept my share of censure to the full extent of my responsibility for the failure to make an exhibit.

"On receiving a request from Professor Allen, secretary of the California Educational Exhibit to prepare some school work for exhibition, I at once called the attention of school boards and teachers throughout the county to the matter.

"The schools of the county outside of this city generally responded favorably, but Principal Heaton of the city schools expressed himself to me and to the teachers as opposed to the exhibition of any and all school work, claiming that it is never honestly or fairly made, and declined to assist in making any exhibit either for the State Teachers' Association or for the World's Fair.

"The country teachers, seeing that the principal schools of the county would not join in the undertaking, became discouraged, and I did not press the matter further.

"The best I could do was to furnish, as requested, the statistics from the records, showing the growth of the schools of Fresno county from the year 1860 up to and including the year 1892.

"There were also sent to Professor Allen two or three relief maps of the county, made by country school children."

COUNTY SUPERINTENDENT WILSON, of Colusa, writes: "Have you heard the joyful news? We've a High School! The election for the Colusa District High School was carried by a majority of 148 votes. Now we hope to enter the front rank educationally."

The Relation of Municipal Governments to City Boards of Education.

Judge Ogden, of Alameda county, has handed down another decision bearing on this mooted question. The decision was made in the suit of Lynch vs. the Board of Trustees of the city of Alameda. The opinion is as follows:

"This is an application by one James K. Lynch, a resident and taxpayer of the city of Alameda, for a perpetual injunction restraining the defendants, as Trustees of the city of Alameda, from purchasing a lot for school purposes in said city.

"In the cases of Kennedy vs. Miller and City of San Francisco vs. Daner, vol. 32 Pac. Ref. pages 558-561, our Supreme Court has decided Boards of Education in cities to be bodies corporate distinct from the municipal bodies. The relationship, or, if we might use the term—affinity, of all bodies corporate, exists and is created by virtue of some act of the Legislature. I have looked in vain for some provision of law giving the authority to the city of Alameda to purchase and donate to the Board of Education—a separate corporation—land for school purposes. I find none; but on the contrary, I do find in the charter of the city of Alameda a provision authorizing the Board of Education to purchase * * all real estate for the use of schools of said city.

"For the foregoing reasons and for the reasons set forth in the opinion filed April 21, 1893, in the cause entitled as above No. 8612, I am of the opinion that the temporary writ heretofore granted herein should be made perpetual, and it is so ordered."

EDITORIAL.

WE make every effort to keep our mailing list correct, and the JOURNAL is mailed promptly to all. If you do not get it regularly, drop us a postal card with your correct address, in order that we may remedy the difficulty.

CALIFORNIANS who contemplate visiting their old homes in the East, after "doing" the World's Fair, should read the advertisement of the Baltimore and Ohio Railroad. No other route presents so many and varied attractions.

OWING to the unauthorized collections made from some of our San Francisco subscribers by a dishonest subscription solicitor who failed to report to us, we are unable to credit those who paid him unless they send us information of the fact.

WE are always glad to receive contributions on educational subjects, and items of school news. Teachers and school officials will favor us and add much to the interest in the JOURNAL, by forwarding the educational news from their localities.

IF County Superintendents will kindly forward as promptly as possible revised lists of District Clerks for the school year beginning July 1, 1893, it will greatly facilitate the matter of placing the JOURNAL with those who are entitled to receive it.

A STATEMENT has been published in many Eastern educational journals to the effect that the California Legislature last session enacted a law granting women the right of suffrage at school elections A bill for this purpose was introduced, but contrary to the popular impression it was not passed.

THIS number of the JOURNAL is necessarily addressed to the clerks whose terms have expired. In most cases, of course, the same clerks have been re-elected. Where a change has been made, we trust that the JOURNAL will be handed promptly to the clerk elect.

SOME time ago we called attention to the exploits of an imposter who was travelling through the State soliciting contributions of all sorts of specimens, of interest to naturalists and scientists. He calls himself a Professor, has numerous aliases, possesses a marvelously glib tongue and has duped a great many credulous people, securing thereby a large and valuable collection of petrifactions, botanical, geological and ethnological specimens. Again we say, look out for him.

AN event of unusual interest, in school circles at least, is the excursion to the World's Fair of twenty-one pupils of our public schools, selected by competitive examinations held all over the State. The trip was made in the car Santa Ysabel, which was especially fitted up with home comforts for the occasion. The excursion was projected and carried out by the *Examiner*, and that enterprising newspaper has borne all the expenses. The educational value of this excursion to the fortunate pupils who have thus won distinction will be great indeed.

THE Connecticut legislature passed a bill providing for a new series of books. A certain number of pages in each must be devoted

to describing the effects of alcohol and narcotics. It provides further that when the "subject is massed wholly or in part in a chapter or chapters at the end of a book, such book shall not be considered as meeting the requirements of the law." The comptroller is directed to withhold the State appropriation from any school district where text-books are used that do not treat the effects of alcohol and narcotics, as prescribed by law.

THE following are the chief features of Pennsylvania's Free Text-book bill: "School directors or controllers shall purchase text-books and other necessary school supplies for use in public schools of their respective school districts, as such new text-books and supplies are required, out of the school fund of the district; and when so procured the necessary books and school supplies shall be furnished free of cost, for use in the schools of said district, subject to the orders of the directors or controllers thereof, whose duty it shall be to provide for the return of and for the safe keeping and care of the books."

PRINCIPAL PENNELL, of the Stockton High School, has been elected Principal of the Chico State Normal School, to succeed Principal Pierce, who will take charge of the Los Angeles State Normal. Principal Pennell was called from Marysville to Stockton one year ago. He was graduated by Harvard, and has a wide reputation as an author of text-books in use throughout New England, and of works on Greek and Roman history. For a time he was acting Professor of Greek in our State University. His work in the Stockton High School has been very successful, as was also his work in the Marysville school.

THE text-book law passed by the Minnesota Legislature authorizes the Board of Education of every school district to select or contract for the text-books needed for the schools under its charge, to buy the text-books selected or contracted for, to loan them free of charge, or to sell them at cost to the pupils. Publishers are required to file in the office of the State Superintendent a list of their books, with the minimum prices. The State Superintendent is required to furnish a certified copy of this list to the clerk of each school district. If a majority of the legal voters of any district vote in favor of free text-books, it is the duty of the Board of Education to provide them.

A GREAT many teachers have already gone to Chicago to spend the vacation season, and many more will follow this month and later. Those who go now will be able to attend the meetings of the World's Educational Congresses, July 25-28. The topics to be discussed are: Higher education, secondary education, elementary education and kindergarten instruction, school supervision, professional training of teachers, art instruction, instruction in vocal music, technological instruction, industrial and manual training, business education, physical education, educational publications, rational psychology, experimental psychology. The meetings will be held at the Art Institute, Michigan avenue and Adams street, in the mornings and afternoons of July 26, 27 and 28. Two general sessions of the entire congress will be held: one on Tuesday evening, July 25; the other on Friday evening, July 28. The Art Institute will be official headquarters.

THE *Primary Teacher* has some thoughtful suggestions concerning the general sentiment among teachers that they cannot understand the psychological and pedagogical literature that relates to their work. This brings a discouragement and a letting-alone of the very books they need most for intellectual culture and professional improvement. These books are hidden mines under the surface of general literature and only discover their treasures to the earnest, plodding souls who are willing to search and dig for it. And the best of it all is, that mental research along the lines of professional literature, not only is the very best means for intellectual growth but it creates a taste for better things to the exclusion of worry over the small details of every-day life that sting like nettles. "I worry far less over the troublesome things about school," said an earnest teacher, "since I began this outside study of what education really is. I am so lost in the vastness and scope of the subject that the little annoyances of school really dwindle away."

BY the death of Senator Leland Stanford, California has lost her most distinguished citizen, and the cause of education its greatest and most liberal patron. Prominent as he has been for many years, in the affairs of the Nation as well as in those of his own State, the story of his life is familiar to all. By the aid of his vast wealth he performed a feat that has no parallel in the history of the world—the creation of a University which at once assumed rank among the great institutions of learning. The benefits that successive generations of

youth will derive from the fulfillment and growth of this philanthropic conception are immeasurable. Upon this beneficent act, which was inspired by his only son, to whose memory the University is a magnificent tribute, the permanent fame of Leland Stanford will eventually rest. In a letter addressed to President Jordan, the last letter signed by the Senator, he expressed at length some of his aspirations concerning the future of the institution which he has so munificently endowed. The following extract will show the scope of his ideas on education: "I may say that I propose the institution shall have steadily as an aim the possibilities of humanity and how to realize them. As all know, the earth is inexhaustible in its supplies for man's wants—to any degree conceivable. Though all should be surrounded with the comforts and the elegancies of life—to the extent even of a palace, with all its suitable accompaniments—the sources from which the materials would be derived—principally the quarry, the forest and the mine—would not be sensibly affected; and, therefore, at the last, whether people shall have these comforts and elegancies will depend upon the intelligent application of labor to the earth's resources."



JULY, 1893.

J. W. ANDERSON, - - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - - Deputy Superintendent of Public Instruction

The following decisions have been made since those last reported:

463. Apparatus may be paid for out of County Fund after an eight months' school has been maintained. Dictionaries may be paid for out of County Fund after an eight months' school has been maintained. Water for use in school buildings may be paid for at any time out of the County Fund, it being a necessary supply for the schools.

464. Failure to elect a trustee causes a vacancy. (See Section 1614 of the Political Code as amended by the late Legislature.)

465. No teacher has any right or authority to hire a substitute for any time whatever; this must be done by the Trustees, and the party employed must be the holder of a legal certificate in full force. The order for the salary of a substitute teacher must be made in favor of the substitute.

466. No Normal Class, except the Normal Class in the San Francisco Girls' High School, nor Normal diploma, unless granted by a State Normal School in the proper sense of that term, can be recognized under our law. The mere fact that the Normal Class is connected with a State University does not signify, unless the University has been accredited by the State Board of Education, as provided in Secti n 1775 of the Political Code.

467. Cities of the Fifth Class cannot have a city Superintendent of Schools. The Secretary of the Board of Education in such cities performs the duties of Superintendent. This Secretary must be a member of the Board of Education. (See Section 804 of the Municipal Corporation Act, Statutes of 1883.)

468. It is the duty of Boards of Education and Boards of Trustees to pay all moneys collected by them from any source whatever for school purposes, into the county or city treasury to credit of the special fund of the city or district.

469. If at the election for Trustees, parties receive an equal and the highest number of votes there is no election, and a vacancy occurs. Section 1614, subdivision 1, as amended by the last Legislature expressly states that failure to elect creates a vacancy.

470. Any teacher employed by a Board of Trustees for a specified time who leaves the school before the expiration of such time without the written consent of the Trustees, shall be deemed guilty of unprofessional conduct, and the Board of Education are authorized to suspend the certificate of such teacher for the period of one year.

471. Boards of Education may recognize San Francisco Normal Class Diplomas, but they are not compelled to do so.

472. It has uniformly been held by this office that parties under the age of eighteen years cannot be admitted to Teacher's examinations.

473. In case of a tie vote for Trustees, there is no election, and a vacancy will occur. This must be filled by the Superintendent until the next election. The old Trustee does not hold over in case of a tie; his term ceases on July 1st, subsequent to the election.

474. Parties holding special certificates cannot be legally elected as Principals of High schools.

The apportionment of State Fund, which will be made in July, 1893, will be applicable to the payment of salaries of teachers for the year ending June 30th, 1893.

By an unfortunate oversight the words "and high school" were omitted from section 1775 in preparing the amendment of that section for the late legislature. The only way to account for the omission is that "too many cooks spoil the broth." The effect of the omission is that Boards of Education in one county are not authorized to recognize the High School certificates granted in other counties. There seems to be no way to remedy the matter before the next meeting of the Legislature.

The Normal School at Valparaiso, Indiana, is not a State Normal School. Any certificates granted upon diplomas from said school are null and void. If Superintendents or Boards of Education desire to obtain information relative to these schools they can at any time do so by addressing this office. It is our intention to make a list of all State Normal Schools as soon as time will permit.

The order for printing 20,000 copies of the School Law was made by this office on the 23d day of March, 1893; but, in consequence of deficiency in the appropriation for the State Printer's Department, the State Board of Examiners were compelled to delay this work, along with much other work, until after the 30th day of June. The order for School Laws is again before them, and we hope to be able to supply the Superintendents during the month of July. As soon as ready the copies will be distributed.

CALIFORNIA SCHOOL ITEMS.

THERE are 465 inmates at the Whittier State School.

DR. LYMAN GREGORY is Superintendent of Riverside county.

MAYFIELD, Santa Clara County, has voted to establish a High school.

A UNION High School has been organized at El Cajon, San Diego county.

THE Healdsburg High School has been accredited by the State University.

SAMUEL LACHMAN, deceased, bequeathed $1,000 to the Weaverville public school.

A $3,000 school house will be erected in Altamont, Alameda County, this summer.

THE new school-house in Island District is the best country school-house in Plumas county.

PROF. KLEEBERGER, of the San Jose Normal School, is visiting Normal schools in the East.

MADERA county has twenty-seven school districts and 1,326 children between five and seventeen years of age.

SAN DIEGO county loses seventeen school districts and 1,509 children by the organization of Riverside county.

THE Preston school of Industry will soon be opened. Boys eight to eighteen years of age will be received.

CITY SUPT. HOUSH, of Salinas, presented his resignation to the Board of Education at the close of the work for the year.

A FRIENDLY suit has been instituted to determine the legality of the County High School election in Stanislaus county.

SUPT. LEROY D. BROWN, of the Santa Monica schools, has been elected City Supt. of the Los Angeles schools, vice Supt. Friesner, resigned.

JUNE 17th, it was decided to organize a Union High School District comprising thirteen school districts in Lassen county and ten in Modoc.

THE plans have been selected for the $60,000 addition to the Los Angeles State Normal School. The building will be used for general school purposes.

MISS MARGARET SHELLENBERGER, principal of the training department of the State Normal School at San Jose, has accepted a position in Stanford University.

A NUMBER of new school houses will be built in Santa Clara County this summer. Moreland district will erect one costing $4,000, Morgan Hill district, $5,000, and Palo Alto district, $15,000.

JUDGE GREENE, of Alameda county, has decided that the $400,000 school bonds of the City of Oakland were legally issued. The case now goes to the Supreme Court for final judgment.

PRINCIPAL WALLACE, of the Grass Valley High School, was given a serenade and reception on the occasion of the announcement that the University had placed the school on the accredited list.

CHARLES H. SHINN, in *Educational Review*, says that Santa Barbara claims credit for the earliest effort to establish a school in California. In 1784-87 Manuel Lucca opened a school there for the sons and daughters of good families, at a tuition rate of $125 a year.

J. H. BRALY, who was Vice-principal of the San Jose State Normal School for thirteen years, has recently been elected President of the Southern California Savings Bank. Mr. Braly has been engaged in the banking business since his resignation from the Normal School.

THE second election for the issuance of $75,000 bonds to build a High school in Fresno was held June 12th, and resulted in a vote of 4 to 1 in favor of the bonds. As all legal technicalities have been settled by this new election, Fresno will soon rejoice in the possession of an adequate building for the High school.

PROF. SCHAEBERLE, of the Lick Observatory, has returned from Chile, whither he had gone with the expedition to observe the eclipse of the sun. He reports that the expedition was a great success. At the time of totality the sun's corona was bright and well outlined. An official report will be prepared by the Professor, and will appear in a large volume.

IN the case of the Linden High School District, Judge Smith has made a decision abolishing the district and closing the school. The fatal point against the organization was that in two school districts included within the boundaries of the High School District no election was held to decide whether or not these districts should be made part of the Union District.

THE Los Angeles Public Library has one of the best buildings on the Coast and probably the best collection of books, most scientifically arranged, catalogued and served to the public. There are 30,560 volumes, classified as follows: 438,

philosophy; 901, religion; 1,035, sociology; 122, philology; 991, Natural science; 583, useful arts; 592, fine arts; 1,871, literature; 1,394, history; 1,237, travels; 1,617, biography; 6,221, fiction; 1,792, juvenile fiction; 252, Pacific states; 559, music.

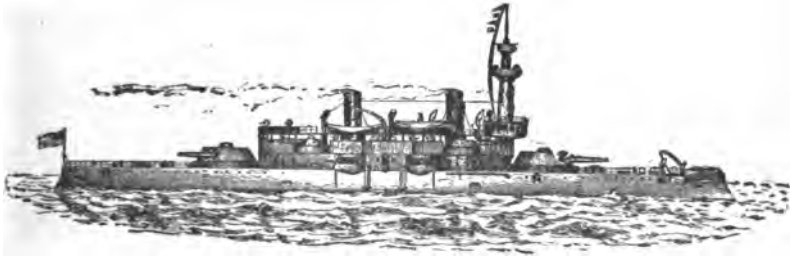
SUPERINTENDENT ARMSTRONG, of San Luis Obispo county, reports the schools of his county in a very prosperous condition. Additions have been made to many buildings, and the establishment of high schools has given a great impetus to the educational movement, since the pupils are now provided with greater facilities for a higher education at home. The new high school building at Paso Robles, in construction, fixtures and interior appointments is not excelled in the State. This building will be ready for use at the beginning of next year.

THE *Santa Cruz Surf* has the following to say complimentary to the teachers of that county: "Of her teachers Santa Cruz county has reason to be proud. Without referring to the self-evident physical beauty of these lovely types of California womanhood, it can be asserted without controversy that for intelligence, ability, and moral worth they command admiration and confidence. For this cause, if for no other, our citizens feel security in our public schools. Far more potent than any system of education or series of text-books is this personality of the teacher."

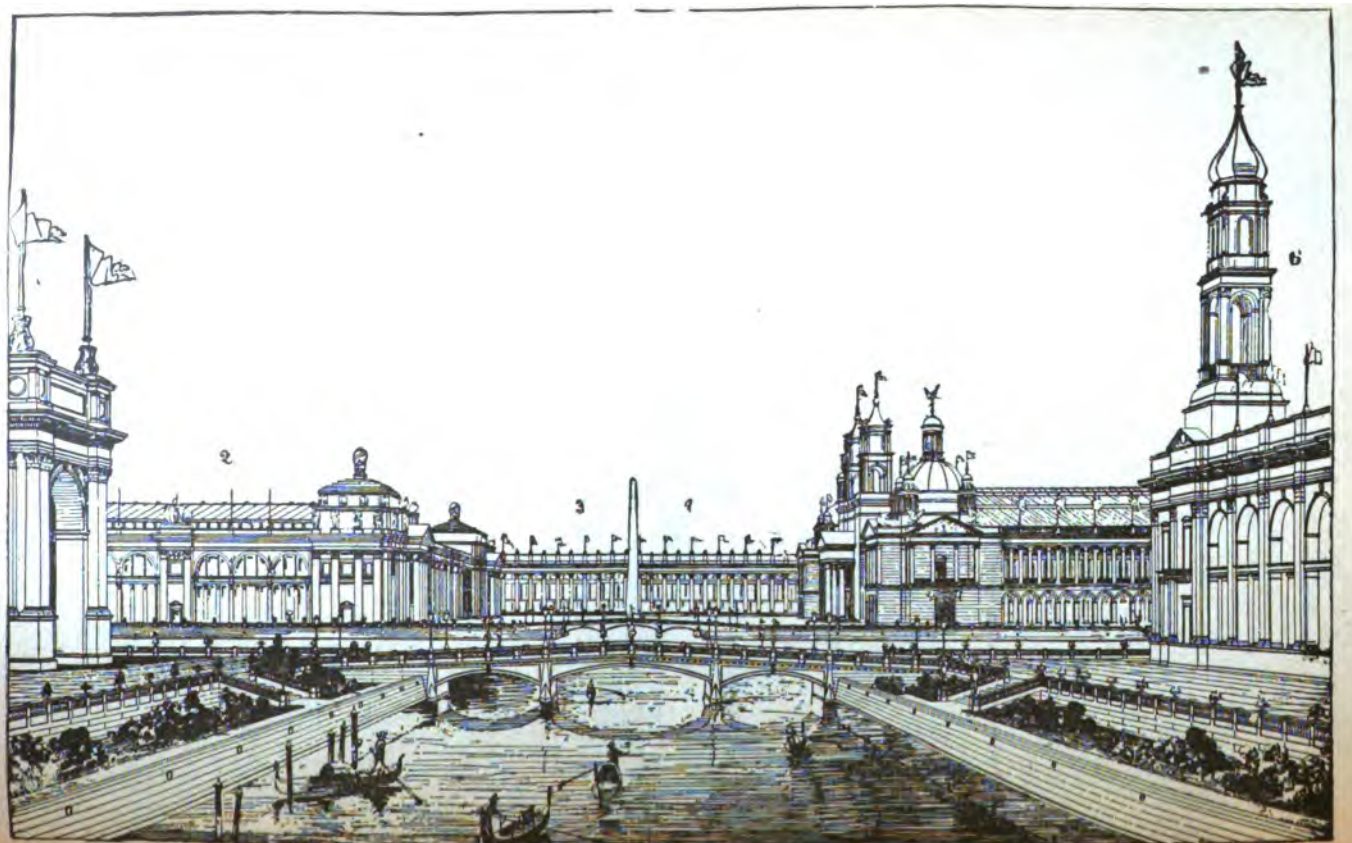
THERE were 40,640 pupils enrolled in the San Francisco public schools last year. The late census reports show 63,317 children in the city, between the ages of 5 and 17. There are 937 teachers; 63 are graduat s of the California State Normal Schools, 24 are graduates of other State Normal Schools, and 307 are graduates of the San Francisco Normal School. 777 are subscribers for at least one Educational Journal. From this it appears that 160 of the teachers in the city do not read educational periodical literature. It would be interesting to compare the work of these 160 with that of the 777 who keep posted in their profession.

THE Valley School District, San Joaquin county, will soon come into possession of 260 acres of land and $2,000 for library purposes, bequests from Joseph McKinney, who died near Banta in April last, leaving a large and valuable estate. McKinney was formerly a slave in Kentucky, came to California with his master in the early fifties, and was soon thereafter left to look out for himself. He was unable to read or write, but developed business capacity which resulted in the acquisition of a large fortune. There is quite a romance connected with the story of this bequest to the public school, and the further bequest of the bulk of his estate to a young lady who, when a little school girl, brought some sunshine into the old slave's life by reading to him.

THE Plumas county *National Bulletin* says: "Miss Katie L. Mullen has assumed charge of the office of School Superintendent for Plumas county, by virtue of the decision of Judge Clough. Miss Mullen had many obstacles thrown in the way of her friends in their efforts to secure this position for her. Once in the contest, however, she and her attorney were full of resources and finally triumphed in the Superior Court. She is a refined and educated lady, a teacher of experience, and will enjoy the distinction of being the first of her sex elected to a county office in Plumas. A chivalric people will give to her, irrespective of party affiliations, that cordial support necessary to enable a school superintendent to do the most good in the cause of education.



U S Coast Line Battle Ship



A VIEW AT THE WORLD'S FAIR.

THE

PACIFIC EDUCATIONAL JOURNAL.

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CURRENT EDUCATIONAL THOUGHT.

WHEN I was young we prepared students for life; now we prepare them for examinations.—JULES SIMON.

CHILD nature is only human nature in its purest form. The teacher must recognize this fact and act upon it. Children must be treated as children. It is nothing against a boy that he hates books and loves fun. If he is wide awake and honest, his fun is perhaps the best part of him. Get hold of him on that side and you will have control of him, try him on the book side alone and you drive him out of school, or render his schooling useless.—HON. HENRY SABIN.

IT were idle for men to praise the work of the State school of America in the imparting of secular instruction. We all confess its value. It is our pride and our glory. The republic of the United States has solemnly affirmed its resolve that within its borders no clouds of ignorance shall settle upon the minds of the children of its people. To reach this result, its generosity knows no limit. The free school of America—withered be the hand raised in sign of its destruction.—ARCHBISHOP IRELAND, Minnesota.

I AM far from believing that stated examinations should be abolis ed. They are a motive, a test, and a discipline; and on each acc unt they are invaluable if they are wisely employed and properly es imated. Their misuse does not justify their disuse. It is perfectly pr per that a pupil should be made accountable for what he has had th opportunity of learning, and the result of such an inquest may pr perly constitute one factor, but a minor element, in the final estim tes of his fitness for promotion.—W. H. PAYNE.

THE visible and certain nuisance of written examinations is an evil which is present, before a community as civilized as ours, all the time, excepting the summer vacation of the schools and colleges It involves an absurdity equal to the absurdities of the decline of chivalry. It waits for some Cervantes, who shall ridicule it so thoroughly as to drive it entirely from the public mind, so that the twentieth century may know of it only as most people know of the squires of chivalry by Sancho Panza, or of knights errant by Don Quixote.—EDWARD EVERETT HALE.

LET us remember that all learning is vain which does not tend to perfect human character and advance civilization.

Do not let your pupils make learning their master, but their slave. Do not let them worship it as a fetich, but teach them to regard it as a servant of their highest comfort and success in life. This is what distinguishes the learning of past ages from the learning of to-day—that it is not for the few, but for the many, and that it is not an ornament, an accomplishment, but a practical requirement in all our daily struggles. We must adapt our teaching, therefore, to these changed conditions; realizing that it is to reach and permeate all classes of people, and that it is worse than wasted if it does not help every man in his daily occupation, and make of them all better citizens.—GOV. FLOWER, New York.

IT is axiomatic that language is valuable only as the medium of thought. Unfortunately it is a truth almost equally evident that until a comparatively recent date not only the English, but every other language, has been presented to students as material for a series of verbal evolutions and gymnastics whose processes and results have been alike, confusing and unsatisfying.

The legend indeed appears on many a printed page: "English grammar teaches the art of speaking and writing the English language correctly." But the mass of competent testimony shows that it has been in spite of grammars rather than because of them if young people have attained any proficiency either in writing or in speaking.—MRS. K. B. FISHER, Oakland Cal.

TOBACCO impoverishes and exhausts the soil more than any other crop we cultivate. Its use is expensive, impoverishing many, and often depriving families of comforts, and even necessaries, of life. Its use in any form or place is a filthy practice; its use in public is an offense, and many times even an insult to those who do not use it. It

is physically unhealthy, not only to those who use it, but to those who by association are subjected to its influence. It injures the mental power and balance of its victim, dulling and deteriorating the intellect, the emotions and the will. It demoralizes and despiritualizes to some extent, all who use it in any form. Its general public use blunts the public moral sense, degrading not only the individual habitue, but also society at large. Its degenerating effects, physical, mental, moral and spiritual, through the forces of heredity, are increasingly felt by succeeding generations. Its use tends to the destruction of the race.—DR. L. B. SPERRY.

TEACHING requires insight into and sympathy with child life, a condition spontaneous in but few adults, requiring in most laborious and sustained effort to gain and to maintain it; and a constant effort to advance in scholastic and professional attainments to escape slipping back into the abyss of slothful indifference. *Teaching* is, of all the professions, the most useful for the public welfare, as it is one of the most laborious and skilled, and should be paid according to its deserts. *Recitation-hearing*, however, is one of the easiest, least skilled, and most useless of all occupations. In this field, as in others, the public gets the kind of work it pays for. The wages of the rank and file of public school teachers average less than those of skilled mechanics. As long as the public continues to pay for *recitation-hearing*, it will not get much *teaching*; for educational missionaries to work without the ordinary inducements are too few to supply the demand, and will probably continue so until the millennium.—PROF. WILLIAM M. ABER.

THE thoughtful and thorough training of the child's power in the domain of number lays the foundation for much of the most valuable work to be done for him in his later years. It helps, as nothing else can, in making effort definite, thought exact, results accurate, and habit, a royal power in the disciplined mind.

This training demands the most careful planning. We must leave no necessary step untouched; we must drill until repetition has f ced the facts under consideration too firmly for time to efface, or neg- l ct to dim them. While, at the same time, we avoid the too long c ntinued demand upon attention which wearies and weakens, we r ust make the order of steps logical and natural, and let the growth c child mind in this field of intellectual activity be as necessary a r sult as is his physical growth in weight or stature.—ANNA A. ABER, State Normal, Indiana, Pa.

GENERAL DEPARTMENT

Dawn Through the Golden Gate.

Where white-browed Morning meets black Night;
  Such mighty battle kings of old,
Sword-girt, and garmented for fight,
  Black-helmeted or crowned with gold—
Such Emperors to look upon!
Huge Indus Dusk, fierce Saxon Dawn!
And all their hosts with clashing shields
That front Pacific's fearful field!

Fit field, these half-world waters! Greek
  And dusk Darius, Indus, all
That was or is, or yet shall speak
  By blazing sword or cannon ball
Finds utterance. The Corsican,
Or saint or fiend, or God or man
Sweeps through the Gate with saber drawn;
"Charge! Pierce the center! On, and on!"

Silvered sabers! Swords of fire!
  Flame-fed horses shod with gold!
Unloosed light, high-born and higher,
  God's first born in glory rolled!
Lo, what chariots! Holy light
Hurled against the hosts of night!
Back, brave Indus! Trench thy braves
In their thousand coral caves.

* * * * * * * * *

He dies, and low lies kingly Dusk
  In battle harness where he stood—
Vast silence! then a sense of musk,
  Of perfumed morn; burned sandalwood.
The moon droops pale and pitiful,
Her widowed face as wan as wool.
Her baby stars have veiled their eyes
To weep as when a father dies.

—JOAQUIN MILLER, in July *Californian*.

The Little Red School-house.

I have had occasion more than once, in this club, to protest against certain reforms, so called, which in my humble opinion are fast destroying the pith and substance of New England character; and now I have a new grievance. The little red school-house is about to be abandoned,—nay, in some townships it is deserted already; its windows are broken, there are holes in the roof, the children have been dispossessed, and the only tenants are spiders, moles, bats, timber-worms, and occasionally a hedghog. One need not look deeply into the history of this country to discover where its great men received their early education: the master spirits of industry, of thought, of art even, were trained for the most part in the little red schoolhouse, and chiefly in New England. I have traveled about our hill towns a good deal, spending many a long summer's day in walking or driving over lonely highways, and in all my journeys I have seen no object more significant, none more respectable, none more rich in retrospective suggestion, than the little red schoolhouse. I never pass by one without feeling an impulse to raise my hat, and yet I am far from being a sentimental person.

Of course the schoolhouse is not always red; in thriving towns it is often painted a staring white; in remote villages it is usually unpainted, except by the hand of Nature, whose brush is dipped in that exquisite, inimitable gray which is the despair of artists and of architects. Sometimes the little red schoolhouse is made of brick; sometimes it is flanked by sheds or rough stables, where the scholars "put up" the horses that have brought them to school from distant farms. Sometimes the building is on top of a "sightly" hill; and then, again, I remember more than one beautiful spot in the woods, where the schoolhouse stands hard by a rude bridge, beneath which musically tumbles a limpid trout stream. As you drive past it on a hot summer's day, the door and all the windows are open, and you have a vision of children's heads bobbing up with curiosity, and of the schoolma'am, rather pale, sitting at her desk, with a bunch of flowers in a tumbler before her. Perchance, also, there reaches you the drawling voice of some urchin, whose perfunctory tones indicate that his heart is outside with the bees and birds, and especially with that long-sought pound trout which is waiting for him in a deep pool beneath an overhanging bank.

Why is it that the little red schoolhouse is to be abandoned? The

scheme (they call it the "reform") is to close all the outlying schools, and bring the children in by wagon and sleigh to the centre of the town, where they are all taught together in one big schoolhouse, fitted with a patent ventilating apparatus which does not work, and with a system of steam-heating. In one large town, not very far from Boston, which I used to visit a few years ago, I was struck by the fact that all the young men, even those of the purest New England blood, spoke with a strong Celtic accent. The explanation was that at school they had associated with the Irish children of the town, and both nationalities had profited by the companionship; the children of Irish birth had cast off a little brogue, and gained a slight nasal twang; whereas, as I have indicated, the children of American birth had picked up just about as much brogue as their Celtic companions had dropped, and so nothing was lost. What is true of school children's speech is true also of their manners, morals and ideas. When all the scholars in a town are brought together in one huge building and playground, there is a fine opportunity to grind them into homogeneousness, as with a mortar and pestle, to smooth down anything peculiar or original in their characters, to elevate the bad children a little, and to debase the good children a little more,—in short, to carry out the great American idea of turning every man into the average man.

Another advantage involved in this method of gathering the school children is that it affords every opportunity for the spreading among them of contagious diseases, such as measles, scarlet fever, diphtheria, and the like; and we all know how desirable it is that children should have these diseases as early as possible, so as to get through with them, or be killed by them, as the case may be, before entering upon the serious business of life.

However, let us be fair; let us be judicial. Perhaps I have not stated quite accurately the reasons alleged by the reformers for the change which I am deprecating. They say that in a large schoolhouse the children can be "graded," and all the teachers can be "specialists." In one room, with a single teacher, will be found fifty children, all under ten years of age; in another room, likewise with a single teacher, will be found fifty children, all between ten and fourteen years of age, and so on. Each room can be visited in turn by special instructors in drawing, in music, and in other branches.

There is some force, no doubt, in this argument, and yet I cannot help thinking that it is based mainly on a fallacy. The essential value

of teaching, from the district school up to the university, lies, I believe, in the contact of mind and character between teacher and taught; and if this be so, then the little red schoolhouse, with its single teacher and few pupils, is a better institution than the big school-house with fifty or more scholars to each teacher, and occasional visits from other skilled instructors. Were I a school committee man or an overseer of Harvard College, I would ransack heaven and earth, if possible, to find teachers with some originality of intellect, and with that force and virility of character which impress themselves upon the plastic minds and hearts of young people; and having found them, I should trouble myself very little about "courses" and textbooks and laboratory implements. I venture to state this as a general proposition. Wherever teaching has been recognized as peculiarly successful, whether in schools or universities, the success has been due to the ability of the instructor, and not to the excellence of the system under which, or to the richness of the appliances through which, he worked. The first essential to such success is that the pupils shall be few, so that the mind of the teacher can be applied to the individual mind of the pupil. It may even be doubted if, for young children, the highly trained teacher of the present day is more efficacious than the farmer's daughter who knows the three R's and has sense and sturdiness. There are strange ideas afloat in what may be described in cant language as "educational circles." Here, for example, is a paragraph which I read this morning in the report of a teachers' meeting:—

"In training the child for this mastery of life, we have to look at his self-expression in order to know his progress; and he can express himself only through two channels,—by means of the tongue (through language and music), and by means of the hand. The first mode of expression is one whose importance has long been understood and appreciated. We are, however, only just beginning to understand the deep significance of what the hand says. Its language covers a wider range of self-expression than the language of the tongue. It expresses deep-rooted instinct which the tongue does not know how to express; on the other hand, it expresses newly discovered ideals of which the tongue does not know how to speak. It is to self-expression through the hand that we have to look for the fullest revelation of what is going on in the child's inner experience."

Such a vagary as this never found its way into the little red schoolhouse.

The reformers would come nearer to being right in this matter of the schoolhouse, if, as they appear to suppose, children really were simply the young of the human genus, with minds exactly like adult minds, except for being comparatively empty. But this is not the case. Children are a sort of "little people," living like foreigners among us, in a world of their own. Their mental processes, their emotions, the manner in which their minds develop,—these things are very slightly understood by grown people, and they are dangerous to meddle with. Hence there is a strong presumption in favor of simplicity in educational methods. Let the child have verge and scope for the expansion of his mind and character; let the teacher know him well enough to adapt herself and her methods to his individual peculiarities. Do not fix him in the iron vise of a schoolroom where he is one of fifty or a hundred.

The reticence of children is in itself a sufficient proof that we cannot twist and turn their minds, fill and empty them, according to the latest invention in pedagogy. I do not wish to be egotistic; and yet perhaps that is what I do wish; perhaps that is the chief value of the incognito which we preserve in this free-speaking Club. Well, then, to take my own case, I remember that, as a child. I lived in a world of my own, the joys and sorrows of which I never dreamed of communicating to any "grown-up" person. I even sounded the depths of orthodox theology, wrestled in prayer, was stung by remorse, repented, was "converted" and rejoiced, lapsed into worldliness again; and yet no suspicion of all this ever crossed the minds of those near and dear relatives who watched over me. A child is a very sphinx of reserve. His mind is a delicate thing, which has its own law of development; and I believe that it grows better in the little red schoolhouse than in the steam-heated and mentally surcharged atmosphere of the huge primary school.—*From the Contributor's Club, Atlantic Monthly, for July.*

School Literary Societies.

MARY E. SACKETT, PACIFIC GROVE, CAL.

The suggestive article in the July JOURNAL on School Entertainments, has been a reminder of a method used in a country school, to awaken interest in rhetorical exercises.

The entire school of fifty pupils, ranging in age from six to twenty-one years, was divided as nearly equally as possible into two

literary societies: The Wide Awakes, and the Excelsiors. These societies were regularly organized, with presidents, secretaries and critics, and met alternately on Friday afternoons. The officers of each arranged the programs, drilled the smaller children, held whatever rehearsals they considered necessary, and managed the entire business of the hour, the president occupying the teacher's chair, the teacher becoming simply advisory counsel, and ultimate umpire.

The critics of both societies made reports at each meeting.

The Wide Awake critic was always on the alert for any slips of the Excelsiors, while even Lord Byron himself would have recoiled from the keen thrusts of the Excelsior swordsman.

A spirit of emulation was awakened, all were urged to their level best. At the close of the exercises the teacher was besieged with inquiries, "Wasn't it better to-day than last month?" "Don't you think the Excelsiors are ahead?" And the Wide Awakes would respond, "Well, never you mind, look out for us ahead next time." "We don't sleep by the wayside." "You may be frozen up by then."

There was no drudgery, everything was on time, from Little Boy Blue, to Hamlet's Soliloquy; the essays showed careful preparation; the exercises were varied; the responsibility of the officers, and enhusiasm of the members combined to produce most excellent results.

At the close of the term, the trustees and entire district were determined on having an exhibition, and consent was somewhat reluctantly given. Every pupil took part, and the affair was declared a splendid success.

The last number on the program was "Esmeralda," just then in its first season at Madison Square Theatre, and the latest thing out. Besides being a charming play, it is well adapted to amateur performance, requiring few stage accessories, and little costuming.

Another reminiscence is that of a High School Literary Society, organized especially for the study of authors and their works. The teacher was a small, nervous, large-brained man, aglow with noble thought and earnest purpose, whose pupils hovered round his desk long after school hours closed, eager as Hyblean bees feeding on willow blossoms, to catch the honeyed wisdom falling from his lips. He familiarized their minds with Channing, Emerson and Margeret Fuller, not so much by analysis of sentences, and etymological derivations, as by the expansion of thought germs, by lucid illustrations, by a rare facility of giving clear vision of the scope, drift, and uplifting strength of those matchless thinkers.

Much of this was given in informal talks, but the society was formed on a definite plan. A poem was chosen, and carefully read at home. At the society it was critically discussed. Essays, readings and recitations were given. Not as much time was spent on one poem, as is now done when made a regular school study, but there was a wider range of literature. The members were left largely to their own devices, only guided in forming independent opinions, and direction given the natural taste and appreciation of the beautiful. They learned to converse on scholarly themes, and so united did their interests become, that the society was continued years after leaving school, and numbered among its members many who have since risen to distinction. Among whom may be named that accomplished scholar, the late Judge T. H. Rearden.

Herbert Spencer in his diatribe against the universities, for the exclusive attention paid to the dead languages, leaving English to become an unknown tongue, and against the methods of teaching the classics, which induced a prevailing hazy conception among the students that Vergil employed his Mantuan leisure in constructing sentences for translation and parsing, while Homer was blind to everything but grammatical constructions and Greek roots, inaugurated a popular rush toward English, which seemed a quickening into fresh, vigorous existence, but after the first excitement had passed, there were the old, dry-as-dust methods again.

The choicest poetry of our own and other literatures will be dissected and analysed as mechanically as a problem in algebra, till a rosebud that

> "Sae gently bent its thorny stalk
> On a dewy morning,"

is reduced to inert protoplasmic molecules, while the exquisite, impalpable, ethereal life, the wingéd Psyche, has flown forever.

To sum up a model course of study would, in my judgment, prescribe daily lessons of one hour forty-five minutes each in English, forty-five minutes in arithmetic and forty minutes in natural science, which should also include geography. A lesson of twenty minutes' duration, twice a week, is all that should be given to drawing.—J. G. KENNEDY, San Francisco.

Graball's Way.

C. M. DRAKE.

Graball was the school trustee of Coyote district. There were two other men who were nominally trustees also, but Graball was *the* trustee, and he "run things" his own way. When the district wanted a place to build a school-house, Graball, as school trustee, could not sell land to the district; but he could sell an acre of land worth $20 to his brother-in-law for $200, and the brother-in-law could be persuaded to part with the land for $250, when trustee Graball asked him to do so as a personal favor.

When the school-house was built, Graball paid Redwood & Co. $30 a thousand for the lumber, and, at the same time bought some lumber for a new barn at $15 a thousand. The teamster charged $5 a thousand for hauling the school lumber, but as Graball was a neighbor, he was charged nothing for his hauling. Envious tongues whispered that some of the school lumber slid off while passing Graball's place, but that might not have been so, though it never was explained where the builder used all the hinges, nails, shingles and other things for which the district paid.

When Graball bought the school furniture, a nice office desk and chair came along with the purchase as a present to Graball. And when books were bought they did not always find their way to the school library.

Mrs. Graball took the school census at the maximum price per day, and the school teacher wrote it out for her without any trouble. Graball's boy was janitor, and drew $2 a week for watching the teacher sweep out the school-house, and when the teacher wanted another broom, the district bought two nice ones and Mrs. Graball let the teacher have her old one.

Graball's had all the pens, ink, paper, etc., they wanted as long as the school supply lasted, and Graball bought the whole bolt of toweling and a gross of cakes of the finest toilet soap, to keep the pupils clean. Graball kept the soap and towels at his house, so that the careless pupils might not waste them.

The teacher got good wages, so of course she was able to pay Graball $7 a week for her board; but she did think it rather hard that she should be charged a dollar whenever she rode to town.

The nice heating stove in Graball's parlor was bought for the school district, but his old stove really answered every purpose for the school.

Why two tiers of stove wood made a school-house cord, and four tiers a cord for Graball's kitchen, was a mystery that even our State arithmetic could not solve, specially when the same man cut both cords of wood.

Is the above picture overdrawn? Not very much, for within the past half dozen years I have known of various Graballs of school trustees doing every one of the above mentioned things. The great majority of our school trustees are patriotic men with a real interest in their school, but there are too many others who are not in it for charity or for their health.

If the county superintendent of some county should publish a complete itemized list of the expenses of each district of that county for the past school year, it would cause some people to blush, if they have not forgotten how, and there would be several changes of school trustees at the next school election.

METHODS AND AIDS.

Classification of The Verb.

G. S. METCALF, CARPINTERIA, CAL.

Only a few of our grammars give anything like a correct or logical classification of the verb. One popular grammar asserts that according to use, verbs are divided into three classes, *transitive*, *intransitive* and *copulative*. The author might just as well say that the Christian religion is divided into Protestantism, Catholicism and Methodism. The difficulty lies in determining the bases on which to classify and in assigning each class to its proper basis. For a complete classification it will require at least six bases, as will be seen in the following.

The Verb.

DEF. A word used to assert or assume action, being, or state of being.

CLASSES:—

1. *As to limitation.*

{Finite.—One limited in form by person and number; as *runs.*
{Infinite.—One not limited in form by person and number; as *to play.*

2. *As to transivity.*

{Transitive.—One having an object expressed or implied; as *kill.*
{Intransitive.—One not having an object expressed or implied; as *sit.*

3. *As a predication.*

{*Copulative.*—One used to assert the attribute of the subject. Ex. Sugar *is* sweet.
{*Attributive.*—One containing the asserting element and the thing asserted. Ex. Flowers *bloom.* Flowers *are blooming.*

4. *As to form.*

{Regular. } DEF.—in grammars.
{Irregular }

5. *As to inflection.*

{Complete.—One found in all the modes and tenses; as *love.*
{Defective.—One wanting in some of the modes and tenses; as *beware.*
{Redundant.—Having more than one form for the past indicative or perfect participle; as *bid, bade* and *bidden.*

6. *As to rank.*

{Principal.—One which by itself will make a complete assertion.
{Auxiliary.—One used in helping to make a complete assertion. Ex. *have, shall.*

Grading in Country Schools.

In my opinion there is no worse evil in the country schools than the classification of pupils which is attempted in many States, under the supposition that what has proved a good thing in the very large schools of cities would be beneficial if partially adopted in the small schools of the rural districts. Hence, while most cities classify by grades of a year's work in the case of pupils advanced into the third and subsequent years' work, and by half years in the work of the lowest primary divisions, the Superintendent of the county or State thinks that he has done a great thing if he has introduced classification into his rural districts to such an extent as to have three or four grades where there are ten grades in the city.

The important thing to be regarded in the matter of grading is the intervals between classes. If the intervals are a year, as in the Grammar School whose pupils are aged from eleven to thirteen, then it is clear that each class contains differences in qualification which may be as great as one year's study would produce. In the lowest classes of the primary grades there would be differences of a half-year. This means that in each class where the teacher set the lessons for the capacities of the best pupils, those lessons were too hard for the

least advanced pupils. On the other hand, in the classes where the teacher adapted the lessons to the capacity of the least advanced pupils, the best ones would not have enough to do, but would acquire listless habits. If the lessons were set for the average of the class, there would be cases of too much work for the poorest and of too little for the most advanced. Now it has been shown (and one may easily verify the fact) that a year's interval is too great between classes of the age under fourteen, and a half-year too great for pupils of six, seven or eight years. The growth of the mind is too rapid at those early periods to keep pupils in the same class for a year without detriment to the pupils in the two extremes of the class. For the best get listless or indolent, losing interest in their work, while the slow minds get discouraged because they are dragged along after their brilliant rivals and lose their self-respect. This is a dreadful result, as it actually exists in many a school famous for its grading.

Now when the rural schools attempt to secure some of the benefits of the graded system—and these benefits are gain in time for recitations, and the mutual help that pupils of the same grade give one another by showing different points of view of the lesson—the rural schools make a system of two, three or four grades instead of ten, and suppose that they have really secured some of the good which the city schools obtain, This is, however, only a supposition.

If an interval of one year is too great, it is evident that an interval of two or three years is far worse. The entire course of study is eight or nine years in the so-called district school. Four grades give intervals of two years, and three grades give intervals of about three years. The most advanced pupils in each class are likely to be two years or more in advance in scholastic preparation beyond the lowest of their classmates. These advanced ones are kept "marking time" while the teacher is laboring with the struggling dullards of the bottom of the class. These are perhaps not dullards except because they have the misfortune to be placed in a class with pupils far in advance of them.

But it is supposed by some teachers that it is possible to conduct a class of this kind in such a manner that the advanced pupils have enough to do while the less advanced do not have too much. When this problem is well solved it will be found that the teacher has arrived at individual instruction or has made a minute sub-classification within each nominal grade.

In the "ungraded" school there prevails individual instruction

with little or no attempt to bring together pupils in their work. The numerous recitations which this involves gives the teacher only a brief time for each. Five minutes for a grammar lesson do not admit of the discussion of the grounds and reasons, or of anything fundamental, and the teacher is liable to resort to requiring only memory work, as that alone can be tested in the least time.

But in the ungraded school there is a chance for the bright and industrious pupil to make good progress by aid of a good text-book without much aid from the teacher. I do not consider the evils of the ungraded school to be so great as those of the partially graded schools such as are found in Iowa, Missouri, Illinois, Massachusettes and in nearly all of the Northern States. They are stiflers of talent in most cases. Where the teacher is very conscientious and thorough the school bears heavy on the slow pupils and produces discouragement and the loss of self-respect.

What is the remedy for this waste of the best pupils by keeping them marking time until they lose all interest in their work? What is the remedy for this waste of time of the slow intellects by discouragement?

I think that the answer to this may be found in the adoption of some form of the Lancasterian or Monitorial System—using it sparingly and under careful supervision. The more advanced pupils may be set to instruct the backward ones, to a certain limited degree. However, this must not be attempted except by teachers who are skillful and full of resources. Otherwise the process or method will fall into the same ruts that the old-time system fell into. We do not wish to restore the "Pupil Teacher System" nor to see a too extensive use of the Monitorial System. But invention has not been exerted on this line. There is unlimited opportunity for devices which shall employ the bright pupils in making easy steps for the backward pupils and in testing their progress. We have seen the evils of the Lancasterian System in filling the ranks with poor teachers. The modified Lancasterian System which I believe useful in ungraded schools, and to take the place of the mischievous system of partial grading in many village schools demands, before all, that the teacher shall be better than ordinary. The mere routine teacher will not serve the purpose. Nor have we any use for the apprentice teacher or the half-cultured teacher of any kind.

I hope that good teachers may be found who will brave public prejudice and make experiments along this line.—DR. W. T. HARRIS, in *Intelligence.*

Declamation.

If it is desired to make a recitation of the lesson read or of *any selection*, commit the words exactly, and after the *mental picture* has been clearly formed in the mind, apply the gestures, bringing out the scenes and characters graphically and properly disposing them on the right and left, as the interpretation and imagination direct.

GESTURE.—ILLUSTRATIVE, DIRECTIVE AND EMOTIVE.

Illustrative.—Suits the action to the word.

"Each horseman *drew his battle blade.*"

Directive.—Points out person, place or thing, carries the eye of the spectator to the object spoken of, either visible or located by imagination.

These gestures must be arranged with pictorial accuracy and taken in upper, middle and lower lines.

Upper Line.—The hand and eye must be elevated above horizontal or shoulder, as in locating mountains, speaking of the firmament or of any object above the speaker.

Middle Line.—In addressing persons near by, or in speaking of objects at a distance, the hand takes the middle line, which lies between the shoulder and the waist.

Lower Line.—The hand falls below the waist line in pointing to objects near or below the level of the eye.

Emotive.—An outward expression of an inward feeling.

"Stay, lady, stay, for mercy's sake,
And hear a helpless orphan's tale."

A FEW IMPORTANT RULES FOR GESTURE.

1. First, stand properly. Half the battle is gained when we have assumed the right position and can change the poise at will.

2. No gesture should be made without a reason.

3. Uniform strains require little gesture, while variable, passionate expressions require many.

4. The hand and fingers must be carefully trained.

If the joints are stiff and angular, practice the Decomposing and Feather Movements; the second and third fingers should lie together and curve somewhat more than the first and fourth, and be separated from the first a little below second joint from knuckle. There should be a curve inward from the tip of the thumb to the wrist. The thumb never falls into the palm of the hand unless to signify treachery or wickedness.

5. The eye precedes and accompanies the motion of the hand, yet does not look after it constantly but returns to the audience.

6. Every accented motion must have a slight preparatory movement in the opposite direction.

7. Except in violent passion, the lines of gesture must be in curves. Mentality is expressed by inward lines, passion by outward lines.

8. Having located any fixed object, we must recur to the same point in again speaking of it.

9. The eye precedes the gesture, which is generally made before the word is spoken.

"Art conceals art; it covers up its tracks."—*Parsons.*

CONCERT DECLAMATION.

In general concert declamation drill, with gesture, we can make a practical application of the self-control, easy movements, and good tones gained by the mechanical work in physical culture.

Attention to general declamation leads up to a more careful preparation in individual declamation for Friday afternoon. These much talked of exercises are, more often than otherwise, a farce, and a useless waste of energy. In the work of preparing "Rhetoricals," certain rules should be followed, viz.:

1. Before memorizing, present the selection for the teacher's approval.
2. By rehearsal give evidence of preparation.
3. Teacher's criticism.
4. Pupil's correction.
5. Public delivery.

—*R. Anna Morris in Physical Education.*

Helping Pupils.

Teachers often insist on the pupils "studying out" everything unaided. The teacher refuses to help the pupils because he thinks it will make them more dependent. But the pupils may not know how to study the subject at hand. When this is true, it is a waste of time and energy to have him try to work it out unaided. To illustrate, consider the following problem in the hands of a Third Reader pupil: Mr. Brown began on the first of January to put money in bank. He put in $20 each week, and drew out $25 each month. How much had he left in the bank at the end of the year?

The pupil has failed to get this problem; not because he has made mistakes in his work, but because he had not thought correctly. He had failed to think the conditions in their proper relations. Don't send him home to work the problem at night. Give him some help that will help him to help himself.

Teacher.—What is the question in this problem? Pupil.—We wish to find how much Mr. Brown had in bank at the end of the year. T.—Very well. What must we know before we can answer this question? P.—We must know how much he put in. T.— Read the problem and see whether that is all we must know. P.—He took out some money, so I think we must know how much he took out, too. T.—Can you find, by reading, how much he put in and how much he took out during the year? P.—No, sir; but we know how much he put in every week, and I know how many weeks there are in a year, so I can find out how much he put in during the year; and I can find out how much he took out, because the problem tells how much he drew out each month, and I know how many months there are in a year.

The pupil has received enough help. Let him try the problem. See that he has another one as difficult, but not like it. He will certainly have a tendency to ascertain what is required and what he must know to get what is required. He will have a clear purpose in mind and this purpose will lead him to think the process. Give him a problem of this sort: A boy earns $5 a week and spends $8 a month. How many months will it take him to pay for a safety that cost $48? —*Indiana School Journal.*

THE entire training of a child begins with the observance of certain rules. At first, it knows no rules, and it is kept from hurting itself by others, who are older and able to take care of it. This state lasts comparatively a little while. Soon the rules of conduct come to be acted upon, and from this time onward the child is never beyond the pale where rules do not apply. Properly, then, the very first lesson the child must learn is that of obedience. This lies behind and beneath all other lessons. When the lesson of obedience is once learned, all other lessons are comparatively easy. *To mind* does not require that the child must be governed by hard and cruel rules. Obedience obtained in this way is unnatural. All animals are best trained by kind and gentle restraints. Only harsh rules should be employed in controlling the vicious when more humane measures have failed. The manly boy is the one who obeys; disobedience is childishness.—SUPT. J. M. GREENWOOD, Kansas City, Mo.

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

Dr. Rice's Criticisms.

The concluding article of Dr. Rice's criticisms of American public schools, in the *Forum*, should be read by every one who is interested in education. He names three lines of improvement that must be persisted in if the schools shall ever perform their function. These are:

1. Absolute divorcement of the school management from politics of every sort.

2. Thorough and competent supervision. Not a business supervision, but a professional supervision. One which devotes its efforts to educating the teachers. A supervision that shall both *guide* and *inspire*.

3. The third requisite is that the teachers feel that "it is their first duty to grow," both in professional and in general intellectual strength. This is a necessary sequence of the realization of the other two conditions.

As to Permanence.

A few days ago a gentleman, who has devoted twenty or more years to teaching, was thus addressed by a member of the school board in his village: "We have nothing against you, Mr.——,but we guess it's best to make a change. You are a good teacher, but I guess we'll make a change." This official keeps a grocery and probably knows how to do it profitably. He is in power and can turn Mr.—— out, and has done it. One of his friends says he knows of a man "twice as good as Mr.——," and the groceryman intends to try this man.

How many changes are made on as slight a pretext as this, no one knows, but the number is large. The West is no more given to permanence than the East. Out there the teachers sleep with their grip-sacks by their bed-side. In the East the people have found out that it occasions a loss to the school of about fifty per cent. to change

teachers; but out there, there is such a strife to "get on" that a place is "gone for" while the teacher still holds it. A principal writes that he found among some papers handed him by the president of a school board a letter from another principal to said president asking for his place! There was no waiting to see whether he wanted to leave or not!

While the action of ignorant school boards may not wholly be controlled, something might be done to restrain these evictions of teachers and something to mitigate the evil results.

It has been annually suggested that in each county there should be a live county association; note, a *live* association. That as soon as a new teacher is chosen he is drawn into the association; he signs an application, which is referred to a committee; he is balloted for, and elected. When he leaves the county he takes a letter from the association cordially commending him to the teachers in the county to which he removes. This would be paralleling the action of the churches; what they have found valuable in eighteen centuries the teachers should adopt.

There should be an executive committee of the ablest men and these should be ready to act when called upon by any member. When a teacher is notified that he is not wanted, this committee should call on the officials and argue the matter with them. Even if they do not succeed it will be of some value that this teacher was not dropped out of sight without a sign or sound by his fellows—who in their turn would follow him in the same fashion.

County associations and state associations should exist for some purpose beside the reading of "papers." Let the reader ask himself, "what has my county association done for me?" We believe immensely in associations; not for what they have done, but for what they might do. What a power the state association might be! How little it effects the progress of education! What subject is of more living importance than the well-being of the teachers? Members of the county and state associations of this year do not know that they will be members next year. We cannot think of any readier means of promoting permanence than the turning of dead or semi-dead associations into live parallels to live churches.—*School Journal.*

NORMAL SCHOOLS.

State Normal School, San Jose.

FROM THE ANNUAL REPORT OF PRINCIPAL CHILDS.

The thirty-first year of this State Normal School has been like the preceding years, a period of growth and development. The attendance is more than keeping pace with the increase in population in the State. During the past year the number enrolled in the Normal department was 670, and in the training department 296. Judging from the present indications we shall have considerably more than 700 in the Normal department and more than 300 in the training department next year.

In addition to the class of fifty-three graduated in January we present now a class of eighty-three who have completed the course of study, training and practice prescribed by your honorable Board. We believe that these graduates will do excellent work in the schools of this State. We have gradually raised the standard of admission, so that now only the very best graduates of the grammar schools are permitted to enter the Normal, and some of these fail to do our work in a satisfactory manner. Prominent educational people in various parts of the State are advising us to admit no one into the Normal as a student who has not completed a course in a High school. I do not believe that this proposition should be considered at present. There are very few High schools in the State, and consequently not many High school graduates. The Normal school constantly needs to be in touch with the public schools of the State, because it is the school in which teachers are trained to work in public schools. In countries having the highest educational standards the public school work is mainly in the hands of teachers who have had professional training.

Statistics show that the California Normal schools are not supplying more than one-fourth of the new teachers needed each year. We now have a course of study which requires three years of hard work from the best graduates of our grammar schools in order to obtain the di-

ploma. Educational authorities are demanding higher qualifications for teachers, and we shall soon be compelled to adopt a four years' course. The conditions which I have mentioned bring a pressure upon us from two directions.

Parents and guardians of children are asking that pupils be admitted into the Normal before they have completed fully and well the the grammar school course of study, and they ask that these pupils be allowed to pass through the school as rapidly as possible. School superintendents and trustees are asking us to raise our standard for graduation. Surely we are between Scylla and Charybdis.

In order that pupils may have the best opportunity to do the required work in three years, we promote whenever the work of any grade is completed and we grant diplomas regularly twice a year. This method of promoting and graduating imposes an extra amount of labor upon the teachers, but it facilitates the progress of the pupil through the school. We have no final examinations for promotions, each pupil being graded upon daily and weekly work.

Our duty to this school and to the State requires watchful care over our pupils at all times. The following, taken from our last catalogue, defines our position in reference to discipline and school work.

In a Normal school there should be no need of referring to the matter of discipline. Only those should come, or be admitted, who have well-formed, correct habits. This is, in no sense, a reform school, and young gentleman or young ladies who are not disposed to submit willingly and cheerfully to all the wholesome restraints found necessary for the good, working reputation of the school, will be unhesitatingly dismissed.

We are, in a measure, responsible to the State for the character and acquirements of each pupil graduated from the school. This being the case, we are compelled to exercise the most rigid scrutiny in reference to these matters; and offences that in a mere academic institution might be passed over lightly, are here viewed as indicating the unfitness of the offender for taking charge of and training the children of the State. It sometimes happens that pupils are advised to withdraw from the school, or are even dismissed, when no very serious charges are brought against them; they have merely convinced us that they are not suitable persons to enter the profession of teaching.

No publicity is given to such cases, except when it becomes

necessary to protect the school from false accusations. Nor is our action ever taken with a view of punishing the offenders. They are simply permitted to go to school where they or their parents can pay for the work of discipline. The State can afford to educate for teachers only those above the need of such work.

* * * * * * * *

From the inception of this school down to quite recent times, its trustees and faculty have understood that in addition to the work of training pupils for the work of professional teaching the school should aid in the promulgation of good methods in public school work throughout the State. This was considered of so much importance that the principal was requested by law to conduct institutes wherever called upon by superintendents of schools. These calls become so frequent that the principal was permitted to send occasionally members of the faculty to assist in institute work. The last Legislature amended the law so that the granting of permission of members of the faculty to attend institutes is entirely in the hands of the Board of Trustees I ask for instruction in answering requests from country school superintendents for assistance in institute work.

The principal of the training school, Miss Margaret Schallenberger, has accepted a call from the Stanford University. We deeply regret the loss of Miss Schallenberger's bright and happy influence in this school. She has an enviable reputation as a teacher, and her departure creates a void that will be very difficult to fill. Our worthy preceptress, Mrs. Elizabeth Wilson, has asked for a leave of absence. Her health has become impaired by faithful work in the arduous duties of her office. Mrs. Wilson is a born teacher and manager of children. She has endeared herself alike to teachers and pupils, and we shall all rejoice when she is again in her accustomed place. Other teachers, desiring to take some special university work are asking for a short leave of absence. We shall therefore need four or five new teachers. I hope the Board will appoint none but teachers of the highest reputation for skill, experience and scholarship.

With thanks to the members of the faculty for their faithful labors, and to you, gentlemen of the Board of Trustees, for your cordial support, this report is respectfully submitted.

Work of the Normal School.

PROF. WASHINGTON WILSON, CHICO, CAL.

In practice the Normal School finds two lines of work necessary:

1. Academic work in the subjects; 2. Professional work which is designed to develop teaching ability along lines above indicated.

In the work in the subjects there is an essential difference between that done in the Normal School, even in the same branches, and that done in high schools and colleges, for here the essential content of each must be disclosed as a basis for proper co-ordination which is to be considered in the professional work. This latter line of work is the work of the Normal School proper. It is this professional work which distinguishes the Normal from other schools, and is that for which it is established and supported, and is therefore, of first importance. The academic work *must be done*, but when it *is done* the work of the Normal School *begins*.

The basis for the distinctively Normal School work is a rigid and clear analysis of mental phenomena and processes. This is necessary for an intelligent understanding of a child. This should be done, not only that human feeling, intellect and will may be discerned, but that these may be properly developed in the child.

When this line of work is thoroughly done the student has a new view of human life, of its value and dignity, and consequently a new appreciation of the value and dignity of his work. This view of life cannot come from the study of the subjects alone, else the Normal School has no right to existence, for high schools, and colleges, and universities teach the subjects as well.

What has the Normal School at Chico done along these lines?

In the first year of its history it entered upon the academic line of work vigorously. This work was dominated, not by the spirit of instruction merely, but largely by that of the Normal School. In the subsequent three years this spirit has deepened and widened until now, in the eyes of those who can see such results, it largely permeates the whole. The professional work was next taken up. Some professional work was put into the course of study and a training school organized. The amount of this work has increased from the time of its inception to the present, but more yet needs to be done to secure adequate results. This increasing emphasis of this line of work is in accordance with the policy of the principal who is foremost in the matter, and the faculty, both of which have sought to bring the school up to the conception of a Normal School as above outlined. That this work has been well begun is evidenced by the fact that the graduates are earnest in their efforts to improve their schools, and by the readiness with which they find employment and re-engagement.

In the estimation of Normal School men the professional line of work is well begun.

The school as a whole has made a strong beginning, and with this impetus may move nearer to the work of a true normal school in its future. "A work well begun is half done," says the old adage. This work will never be *done*, for man's capacity for improvement seems to have no limit. That it is well begun may be justly a matter of pride to the retiring principal, Prof. E. T. Pierce, who has largely shaped it from the very beginning, and who goes to a similar but larger field at Los Angeles, Cal.; to the faithful board of trustees, to whose judgment all has been submitted; to the faculty, through whose labors the work has been accomplished; and to the students, who have been benefited by it.—*Public School Journal.*

EDITORIAL.

THE editor of the JOURNAL returned from Chicago July 20, after an absence of seven weeks. The greatness of the World's Fair has not been exaggerated. It cannot be, for everything is of such vast proportions that whatever may be attempted in the way of description is felt to be inadequate. Even traveled foreigners admit that while there is much in the exhibits that is not new to them yet the colossal size of the buildings, their architectural ornamentation and grouping, their rapid construction and the means of transportation are marvelous, and present a striking illustration of the energy, resources and genius of the city of Chicago and the American people. The expense while attending the Fair need not be excessive. Room and board can be secured some distance from the grounds near street car lines, at fairly reasonable rates. It is to be regretted that the stringency of the times and the railroad rates are such that thousands do not feel able to attend, for the Fair is the greatest school of the age.

THE exhibit made by the Catholic parochial schools is exceedingly interesting and attracts much attention.

THE public school exhibit of Ohio is handsomely arranged, Cleveland, Columbus and Ohio have separate large booths with a

competent person in charge of each. The remainder of the exhibit from the State is in the care of prominent educators, each serving two weeks, their transportation and local expense being paid by the State. In this way the exhibit is being ably exploited, each vying with the other to make the best showing. This is what our own State committee desired to have done, and as Prof. Allen has been obliged to return to California to attend to private business, this is what should have been done. Somebody should have chief charge who knows our schools, knows the State, and is active and enthusiastic.

AMONG the many visitors at the Fair whom we met were Miss Maggie Schallenberger, and Dr. Winship of the *New England Journal of Education*. Both intended being present at the Educational Congress in July. She was happy over her prospects at Stanford. He was looking forward with pleasure to meeting his friends in California next Spring.

THIS number of the JOURNAL is addressed to many Clerks whose terms of office have expired. Those who have not been reëlected are requested to hand the JOURNAL to their successors.

IN the case of Bay View vs. Linscott, the Supreme Court has decided in favor of the respondent, thus sustaining the position taken by Superintendent Linscott. The question to be determined was, whether by the incorporation of the town or city of Santa Cruz all that portion of the Bay View school district within the exterior boundaries of the city had been withdrawn from the district. Bay View had continued to elect trustees and maintain a school within the exterior boundaries of the city of Santa Cruz. Supt. Linscott refused to recognize the district or its right to public money, on the grounds that Bay View school district had no legal existence and the alleged trustees were not trustees thereof. The decision was based on Section 1576 of Political Code, which sets forth that a city unless subdivided by the legislative authority thereof constitutes one school district. That portion of Bay View within the corporate limits of the City of Santa Cruz is therefore part of the Santa Cruz City school district and can have no separate Board of Trustees.

California's Educational Exhibit at the World's Fair.

It was not the intention of the committee in charge to secure an

extensive exhibit. It was sought rather to select individual schools in the various sections of the State that would serve as types and indicate the character of buildings, equipment and quality of instruction so far as photographs, drawings and illustrative work could give a clear idea of the situation.

A profound indifference, more trying than outspoken hostility, met the efforts of the committee. A wide-spread disbelief in the genuineness of the average exhibit, an expression to the effect that teachers and pupils should be spared the worry and wear incident to preparation, and a protestation against the inadequateness of the sum apportioned for the purpose by the State Commissioners, all these served as obstacles in the way to the attainment of the wish of the committee, namely, such a school exhibit as would be ample and varied enough to fairly set forth the educational facilities of the State and demonstrate that our system is equal to the best. To this end statistical charts indicating the growth in facilities and attendance in each city and county; relief maps giving a hint as to products and showing the location of school-houses; photographs of school buildings, class rooms and grounds, and illustrative work by pupils showing results, were called for. To secure this material the committee invited the coöperation of Superintendents and Boards of Education. After the issue of several circular letters followed by the personal efforts of members of the committee who were engaged in Teacher's Institute work, material was collected and forwarded to Chicago and space was assigned in the gallery of the State building near the head of the stairs. To Professor Allen was committed the labor of properly placing the exhibit and for nearly three months it has been viewed by the throngs who were eager to see everything to be seen in the California Building.

Whether because of lack of funds, or because of the rush and hurry in attempting to be "on time" that marked the opening of the Exposition, or from both causes, the exhibit is not in good shape. It is loose, scattered and exposed to clouds of dust. Professor Allen is versatile, and his services were in demand all over the building, especially in the horticultural department. He did the work of several men. It is not our intention to locate blame, but the exhibit is not satisfactory to the California teachers who inspect it. There is some very good material there. All credit to the officials and teachers who sent it. Not a little comment is heard because of the failure of some of the prominent cities and counties to be represented. San Francisco

is seen only in the full exhibit of the Golden Gate Kindergarten Association and of Coggswell, which attract much attention. To Mrs. Cooper credit is largely due for a demonstration that warm hearts and generous hands are coöperating in our metropolis in the noblest and wisest work that can engage any generation.

A brief resumé of what the counties have done may not be uninteresting and should be placed on record:

ALAMEDA.—A remarkably fine topographical map of the county by pupils of the Durant school, Oakland, Mr. Dunbar, Principal. Photos of school buildings and illustrative work from Haywards, Livermore, San Leandro and smaller towns and districts. The Temescal school of seven teachers furnished a complete exhibit representing the work of every grade in drawing, mathematics and language, with photos of the school-house and class rooms. The city of Alameda sent no work. Oakland's exhibit is handsomely bound, is excellent as to quality and attracts much attention.

LOS ANGELES.—Statistical county and city maps. Relief map of county and photo map of county with school-houses located by the use of gilt points. Photos of buildings.

HUMBOLDT.—Attractive relief map by two boys of the Ferndale school. School buildings. Map locating all the school-houses. Drawings and a general illustrative exhibit.

SANTA CLARA.—Relief map. Fine map of San Jose by Jane Kocker of the High School. Large album of photos of school-houses, class-rooms and groups of pupils.

SONOMA.—Relief and statistical maps, and a very fair exhibit of illustrative work in all grades. Mrs. Martin, the enterprising County Superintendent, sent a complete exhibit of books and blanks showing the executive department of the county schools.

SAN DIEGO.—A very full exhibit of illustrative work. Relief maps of the State, county, and of the bay and its shores. Drawings and wood work from the Manual Training department of the city. Fine botanical and entomological collections, and photos of school buildings.

SAN JOAQUIN.—Relief map. Map showing location of school-houses. Statistical chart, photos and some illustrative class work.

CONTRA COSTA.—Statistical chart, relief map and a limited amount of good class work.

MARIN.—Relief map, statistical chart and some very superior relief maps of the continents by the San Rafael school.

SAN MATEO.—Map showing location of school-houses.

NAPA.—Relief map and statistical chart, and map showing location of school-houses, and a little suggestive work.

YOLO.—Relief map and chart and some class work showing specimen written recitations.

COLUSA.—Map and statistical chart. Excellent work in botany and English from the town of Colusa.

GLENN, SAN BENITO AND SHASTA.—Relief maps and statistical charts.

TEHAMA.—Maps and photos of buildings and classes.

MONTEREY—Statistics and illustrative work from Gonzales, Parkfield and other districts.

PLACER.—Statistics, buildings and a very superior colored relief map of the county made by grammar school pupils of Auburn.

VENTURA.—Statistical chart, relief map and map locating schoolhouses. Photos showing the earliest school-houses and the handsome modern buildings of Ventura, Saticoy, Montalvo, Mound and Avenue districts. An interesting photo of this exhibit was that of the pioneer lady teacher of California, who is a resident of Ventura county.

SAN LUIS OBISPO.—Relief map, statistical chart and photographs.

SIERRA.—Relief map, chart and illustrative work.

ORANGE, FRESNO, LAKE, NEVADA, SACRAMENTO, TUOLUMNE AND EL DORADO contributed statistical charts only.

THE UNIVERSITIES.—The State University exhibited photos of buildings and grounds. Stanford sent large views of buildings and a fine topographical map of grounds.

THE STATE NORMAL SCHOOLS.—San Jose sent photos of buildings, grounds, teachers and classes and specimens of Manual Training work including modeling in clay. Los Angeles.—Photos of buildings, including the interior of the gymnasium and photos of classes. Chico.—Photos of buildings, etc.

LICK OBSERVATORY furnished fine diaphanous photos of buildings, apparatus and observations.

MILLS COLLEGE was represented by a handsomely framed collection of large photos of buildings and grounds.

COGGSWELL POLYTECHNIC SCHOOL has an attractive exhibit in wood, iron, plaster, with some excellent drawings.



AUGUST, 1893.

J. W. ANDERSON, - - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - - Deputy Superintendent of Public Instruction

[State Superintendent Anderson has been too busy to prepare the usual official matter in time for this number of the JOURNAL.—ED.]

CALIFORNIA SCHOOL ITEMS.

VISALIA High school will open Sept. 4th., with fourteen teachers.

MENDOTA has voted bonds for $3000, to build a new school house.

YORK district, Contra Costa county, voted $1400 for a new school house.

EUREKA district, Tulare county, will build a $2000 school house this summer.

J. W. EVANS, of Fresno, has been elected principal of the Bakersfield schools.

THE Haight school district, Stanislaus county, has voted a tax to build a new school house.

WORTHINGTON school district, Humboldt county, will soon build a new school house.

LUGONIA district, San Bernardino county, has voted $1500 bonds for increasing school facilities.

WESLEY C. Sawyer, D. D., will be acting-President of the University of the Pacific next term.

ISAAC WRIGHT, of Oakland, succeeds E. H. Walker as principal of the Livermore High school.

PRINCIPAL H. C. Faber, of the Tulare schools, has been elected principal of the schools of Santa Maria.

THE Supreme Court has decided that the $400,000 bond issue of the city of Oakland for school purposes, is valid.

PRINCIPAL A. C. Barker, of the Easton High School, Fresno county, has been elected Supt. of the Salinas schools.

W. C. MURRAY, of Mendocino City, has recieved the appointment to a cadetship at West Point Military Academy.

THE new Carneros school house, Monterey county, has been completed and the next term of school will be opened in it.

P. J. MOHR, of Oberlin, O., will have charge of the science department of the San Bernardino High School next term.

THE Petaluma City Board of Education has adopted a course of study embracing a Normal and Commercial department.

RIVERSIDE High School district has been organized in accordance with the new law passed at the last session of the Legislature.

COTTONWOOD school district, Siskiyou county, has voted bonds for a new school house; also Tularcitos school district, Monterey county.

ELK GROVE and fifteen adjoining districts, Sacramento county, have united to form a Union High School district. The school will be located in Elk Grove.

T. J. MCGRATH, the efficient School Supt. of Sierra county, was married at Forest City, June 28th, to Miss Lizzie Finane, one of Sierra county's successful teachers.

PROF. John E. Metzke, at present filling a chair in Johns Hopkins University, has been offered the position of Professor of French in Leland Stanford Jr. University.

PROF. LECONTE, of the State University, attended the World's Congress of Scientists in Chicago and the meeting of the American Association of Scientists in Milwaukee.

EIGHT years ago the public school in Redlands was attended by only seven pupils. Redlands now has a $30,000 school house and there are over 500 pupils in attendance.

SUPERIOR Judge Grant, of Yolo, has decided that the writ of mandate commanding the Board of Supervisors to proceed forthwith to the discharge of their duties in the matter of establishing the Yolo County High School, be made peremptory.

THE following school principals have been elected: Thos. Downey, Modesto; W. H. Anderson, Travers; Geo. T. Hanscom, Sumner; B. F. Allison, Redding; E. H. Walker, Hanford H. S.; G. W. Hinkle, Lemoore; A. D. Wolfe, Plano.

THE following new principals have been elected: S. F. Stuckey, Mendocino; L. W. Babcock, Ukiah High School; F. A. Butts, Ft. Arena; E. Howard, Upper Lake; A. L. Anthony, Lower Lake; G. W. Gretter, Pacific Grove; F. L. Wright, Guerneville; R. Y. Glidden, Mendocino High School.

THE Union High School at Etna has closed a very successful term of six months, under the direction of Principal Federick Liddeke. The Trustees of this district will let a contract for the erection of a high school building, to be located on one of the finest sites in the thriving town of Etna.

PROF. Bernard Moses, of the State University, addressed the Educational Congress in Chicago, July 24th., on the subject of the Latest Revival of the Study of Politics; Prof. Elmer E. Brown delivered an address on the Herbartian Doctrine of Interest; and Prof. Earl Barnes, of Stanford, addressed the Congress of General Education.

THE new wing of the Los Angeles State Normal School building will be 80ft. by 160ft. It will be constructed of brick, with stone finishings. There will be three handsome entrances to this addition. The last Legislature appropriated $75,000 for this building, of which $60,000 will be used for the building proper and the remaining $15,000 for heating apparatus, furniture and incidentals.

JULY 8th, the fine new school house in Monterey was totally destroyed by fire. Library, furniture, and apparatus were destroyed with the building. The library contained many valuable books, and some original Spanish documents relating to the early history of the State. The building cost about $16,000 and had been in use just one year. The library was valued at $2500. The amount of insurance is $12,500. School will be opened in Colton Hall until another new school house is erected.

THE Yreka Journal reports that the schools of Siskiyou county are in a highly prosperous and useful condition, and second to none on the coast, which is not only gratifying, but of vast benefit to the people at large, as it encourages immigration and permanent settlement. Superintendent John Kennedy is complimented for his intelligent and energetic interest in, and management of the county school affairs. He is capable, courteous, reliable, painstaking, prompt and efficient in the dispatch of the business of his office.

THE voters of Black Diamond school district, Contra Costa county, recently defeated the proposition to tax the district $1400 to build a school house. The vote stood 9 for the tax and 40 against. The district has over 100 pupils to accommodate in a school room 20ft. by 30ft., with ceiling 8ft. A deplorable condition of affairs, indeed, and the result, it is said, of the parsimony of the owners of a large land grant embraced by the district. If such action is not criminal it should be made so, and the perpetrators brought to condign punishment.

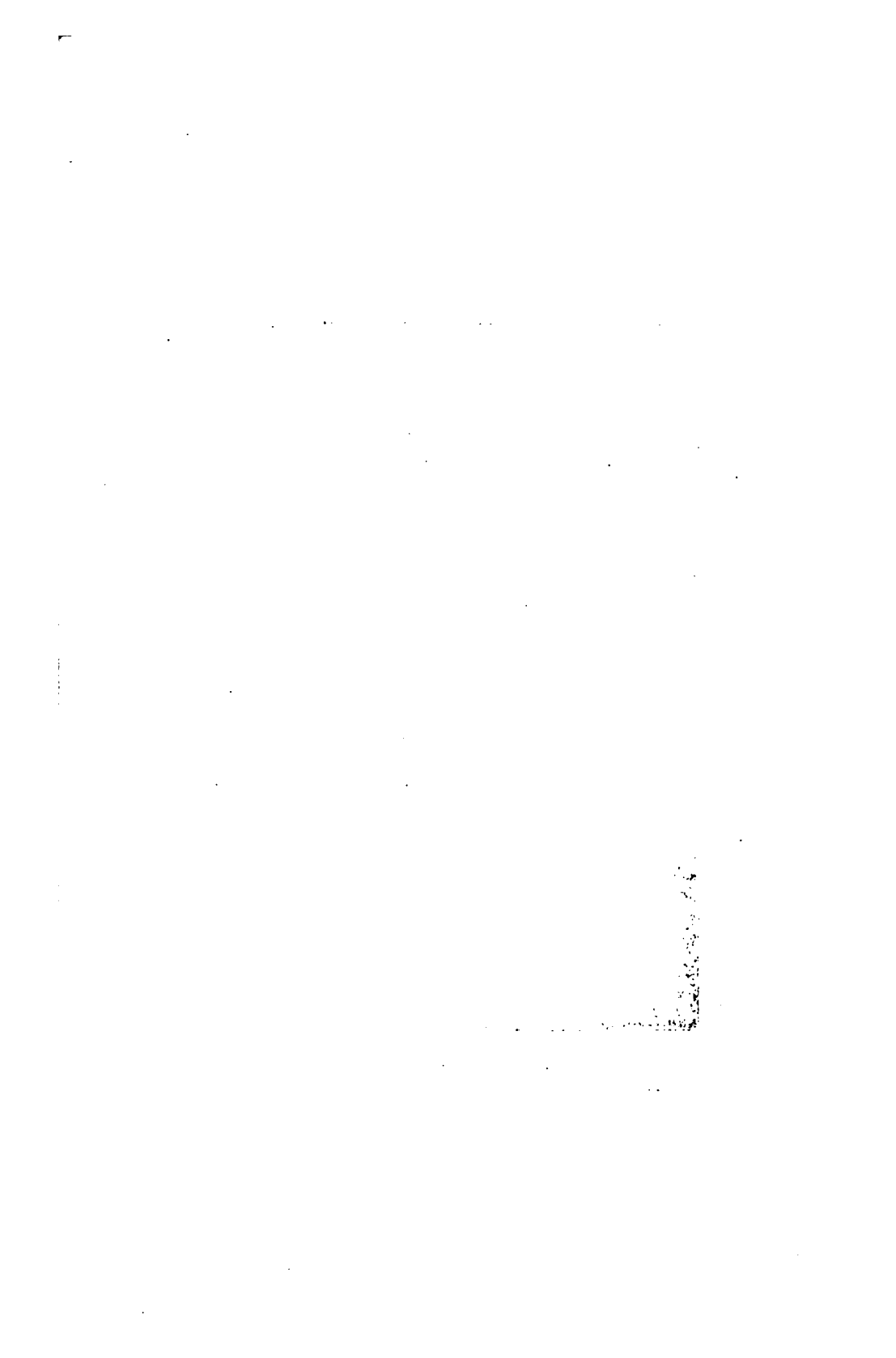
OUR LIBRARY TABLE.

MAGAZINES.

THE Duke of Veragua has an article on "The Family of Columbus" in the July number of the *North American Review.*

Our Little Ones and the *Nursery* for July is a delightful number for the little folks. The illustrations are especially attractive. Published by the Russell Pub. Co., 196 Summer St., Boston.

Godey's Magazine for August shows a varied and attractive contents, both literary and artistic, not only does it retain all the features that have made this magazine under its New York management, but many new features have been added.





ROBERT F. PENNELL,
Principal of the State Normal School, Chico, Cal.

THE

PACIFIC EDUCATIONAL JOURNAL.

Official Organ of the Department of Public Instruction of California.

VOL. IX. SEPTEMBER, 1893. No. 9.

CURRENT EDUCATIONAL THOUGHT.

COULD we not make lists of all the visible and audible symbols that the child develops for himself and thus determine along what lines his symbol-developing tendency moves? Could we not devise tests to show the extent to which the child grasps such symbols, for instance, as the sphere?—PROF. EARL BARNES, of Stanford, at the World's Fair Congress of Education.

NEVER let it be said that our public schools are godless, for they teach health, which is physical holiness; and the ever-present burning Sinai of God's 'Thou shalt' and 'Thou shalt not' sounds its decalogue in children's ears. 'Thus saith nature, thus saith reason, thus saith the law:' and these clarion voices of physiology and hygiene, declaring the sacred laws written in our members, never resounded in so many ears as in these days. Some say our schools are 'godless;' but we teach astronomy, and 'the undevout astronomer is mad.' We teach chemistry, which is God's finger-work. We teach language, which is the universal relation of his indwelling power. The whole curriculum, to one who sees from a spiritual plane, palpitates with divinity.—FRANCES WILLARD.

THE American ideal of the relation between the citizen and the man is the truest; therefore our ideal of civilization and education should also be the truest. But we have lately heard a note of warning which no American who loves his country can afford to ignore. It comes to us from Gladstone. Viewing the magnificent proportions which our country is sure to assume within the next century and forecasting the tremendous influence which it must necessarily exert on

the civilized world, he reminds us that this influence may either be a curse or a blessing to mankind according to the spirit in which it is exerted. He asks which is it to be and he answers: "This depends not upon what sort of a producer but on what sort of a man the American of the future will be."—BISHOP KEANE at Educational Congress, Chicago, July 28, 1893.

Further World's Fair Notes.

THE argument for manual training, now appeals not to the ear, but to the eye; it is not written in words, but in deeds. It is contained not only in the educational exhibit of the World's Fair, but still more in those persons, now men, who, as boys, went to the manual training school, and who are now, as men, witnesses of the power of the new education to create a new type of American manhood.—PRES. WALTER L. HERVEY, of the College for the Training of Teachers.

THE college ought to meet the secondary schools half way in the matter of admission. Many boys do not expect to go to college when they enter the high school; but during the course they receive an inspiration for higher education, but are debarred from the colleges because they have taken scientific rather than classical courses.—PROF. CUTLER, Chicago.

THE secondary school ought to demand the colleges to accept a fair range of electives in the matter of admission. Four years' work in biology ought to give as much power as four years' work in Latin, and it should receive the same credit as an entrance requirement.—WILL S. MONROE, California.

THE most important public work of any community is providing and managing the means of popular education. The people may neglect municipal business, and the penalty is the plundering of the city treasury. In time, mismanagement and thievery become intolerable, there is a municipal revolution, the house is cleaned, a boodler or two indicted, the loss struck off, the plan of city government remodeled, and quiet and comparative indifference once more resume their sway. The people may neglect the schools and permit them to be despoiled by thievery or degraded by place hunters, and the penalty is not only a plundered treasury, but a low and almost irredeemable tone of moral and intellectual life.—ANDREW S. DRAPER, Superintendent of schools, Cleveland, O.

GENERAL DEPARTMENT

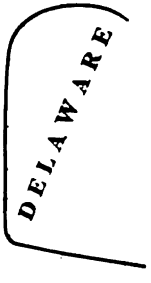
The Old School Exhibitions.

Oh, the old school exhibitions! will they ever come again,
With the good, old-fashioned speaking from the girls and boys so plain?
Will we ever hear old "Iser," with its rapid roll and sweep,
And "Pilot, 'tis a fearful night; there's danger on the deep!"
Sweet Mary dosn't raise her lambs like Mary did of old;
Their fleece is not "as white as snow"; they're wandering from the fold.
The boy upon "the burning deck" is not one half as fine—
He was not "born at Bingen, at Bingen on the Rhine!"

The girls don't speak in calico, the boys in cotton jeans;
They've changed the old-time dresses 'long with the old-times scenes;
They smile and speak in ancient Greek; in broadcloth and in lace;
And you can't half see the speaker for the collar 'round the face!
Oh, the old school exhibition! it is gone forever more!
The old schoolhouse is deserted, and the grass has choked the door;
And the wind sweeps 'round the gables, with a low and mournful whine,
For the old boys "born at Bingen—at Bingen on the Rhine!"

—*Atlanta Constitution.*

The Northern Boundary of Delaware. Why the Curve?



In 1631 De Vries, a Dutchman, planted a colony near the town of Lewes, Delaware. It was abandoned to the savages a few years later. Charles II. in 1632 made a grant of these peninsular lands to Lord Baltimore.

In 1681 William Penn obtained a grant of land westward from the Delaware, and northward of Maryland. A part of his northern boundary was a circle drawn at twelve miles distant from New Castle, northward and westward unto the beginning of the fortieth degree of north latitude. Soon after Penn obtained of the Duke of York, a territory twelve miles about New Castle, and southward to Cape Henlopen.

These conflicting claims laid the grounds for a pretty quarrel and for the historical work of Mason and Dixon.

In 1685 appeal was made to the crown, and a committee of the council directed that the disputed territory be divided equally between

the two claimants. In 1708, Queen Anne ordered the enforcement of this decision, and finally in 1732, the claimants agreed upon the boundary lines. It was decided that a due west line should be drawn across the peninsula from Cape Henlopen to Chesapeake Bay; that this line should be bisected, and that at the point of bisection a line should be drawn and extended northward, though not due north, until it should form a tangent to the circle described about New Castle. From this tangent point a due north line was to be extended until it should reach the parallel running fifteen miles south of Philadelphia, and from the point of contact between the due north line and the parallel a due west line should be run so far as the two provinces extended. It was further stipulated that should the due north line cut a segment from the circle that segment should belong to Penn's county of New Castle. These lines were to mark the boundary between the lands of the Penns and those of Lord Baltimore.

That sounds like a sufficiently clear and specific agreement, but the proprietors quarrelled nearly thirty years over its interpretation, and more than once appealed to the courts. In the course of the controversy it was decided that Cape Henlopen was not the present point of that name, but the point now known as Fenwick's island, and forming the extreme southeastern corner of Delaware; that the due west line should be drawn to the shore of Chesapeake bay; that the radius of the circle and not the circumference should be twelve miles, that the measurements for this radius should be taken horizontally, and that the center of the circle should be the court house at New Castle, still standing.

Local surveyors undertook to lay down the lines, and managed with rude instruments to survey the due west line across the peninsula, to those of the circle, and to find the tangent point. But they worked so slowly that in 1763, Charles Mason and Jeremiah Dixon, surveyors of London, were engaged to complete the work. They reached Philadelphia November 15, 1763, and at once set about their task.

Mason and Dixon adopted the peninsula east and west line of their predecessors, the radius of the circle and the tangent point. This left for their task the survey of the line from the middle of the due west line to the tangent point, the due north line from that point, the arc of the circle extending southwest of the tangent point, and the due west line out into the wilderness.

The work was finished in the autumn of 1767, the Indians who escorted the surveyors having declared when they reached an Indian war-path winding through the forest 246 miles west of the Delaware, and within thirty-six miles of the western boundary of the provinces, that the Six Nations willed that the work cease. Long after, the other thirty-six miles were run.

Along the greater part of this sinuous boundary, stones were set up at every mile bearing "P" on the one face, and "M" on the other, while at every fifth mile were set up larger stones bearing the arms of the Penns and of the Calverts. Part of this boundary was re-surveyed by United States engineers in 1849, and this survey determined that a tiny triangle for a hundred years under Delaware jurisdiction belonged to Pennsylvania.

It will be seen that while in popular conception Mason and Dixon's line is only the boundary between Pennsylvania and Maryland, it really includes likewise the boundary between Maryland and Delaware. The boundary stones are still visible along the line between Delaware and Maryland, and at points on the due west line between Maryland and Pennsylvania. The porch of an old house in the village of Newark, Delaware, is in part supported by a carefully cut stone with partly obliterated armorial bearings on two faces. The stone is almost certainly one of those that were set up at intervals of five miles along the boundary line.

High Pressure.

Minnesota threatens to froth at the mouth with *rabies Psychologiæ*. Boys and girls, not much beyond the mush-and-milk period, are being made to talk glibly of consciousness and apperception, instinct, freedom of the will, etc. Perhaps recent escape from the age of lactation and spoon-food is not so much of a sin as to put them at the most abstruse and abstract of the metaphysical sciences, before they are fairly done with the alphabet and the multiplication table. One fears that the result will be a clogging of the brain-passages with big words, and a hiatus of ideas on all subjects. If such introversion of learning is possible, and the abstract and metaphysical can be put before instead of after the concrete sciences, why longer toil up the steeps of learning, when one may reach the top at a bound? The old idea was that logic, psychology, ethics, etc., came at the end of a four years' college course, itself based on a three or four years' academic course, the whole representing seven or eight years' training above the rudiments

of an English education. But now we have those but little beyond the eighth grade, many of whom would be puzzled to write their own addresses correctly, heels over head into the vat of metaphysics.—QUONDAM ARCHER, in *School Education*.

Gains and Losses in School Census Returns

FOR SCHOOL YEAR ENDING JUNE 30, 1893.

COUNTIES.	DISTRICTS.		CENSUS RETURNS.			
	1892	1893	1892	1893	GAIN	LOSS.
Alameda	55	55	25,052	27,270	2,218	
Alpine	4	4	105	112	7	
Amador	43	43	2,831	2,671		160
Butte	73	72	4,187	4,168		19
Calaveras	50	51	2,361	2,423	62	
Colusa	38	38	2,098	2,075		23
Contra Costa	51	52	3,441	3,497	56	
Del Norte	9	10	517	518	1	
El Dorado	57	58	1,982	2,015	33	
Fresno	137	113	8,277	7,162		1,115
Humboldt	89	89	5,999	6,140	141	
Inyo	12	11	682	865	183	
Kern	49	51	2,225	2,551	326	
Lake	45	45	1,641	1,674	33	
Lassen	34	36	1,033	1,122	89	
Los Angeles	112	113	25,575	27,492	1,916	
Marin	35	36	2,434	2,672	238	
Mariposa	35	35	991	989		2
Mendocino	98	101	4,505	4,664	158	
Merced	46	47	1,819	1,767		52
Modoc	36	36	1,349	1,371	22	
Mono	9	9	306	301		5
Monterey	94	97	4,986	5,083	97	
Napa	53	54	3,604	3,712	108	
Nevada	47	47	4,343	4,398	55	
Orange	32	32	4,157	4,341	184	
Placer	52	53	3,010	3,133	123	
Plumas	27	27	1,000	965		35
Sacramento	71	71	7,787	7,752		35
San Benito	44	48	2,085	2 034		51
San Bernardino	71	53	7,826	5 699		2,127
San Diego	141	120	8,512	7 133		1,379
San Francisco	1	1	63,933	65,317	1,384	
San Joaquin	81	81	6 865	7,047	182	
San Luis Obispo	93	95	4,957	4,983	26	
San Mateo	32	31	2,641	2,714	73	
Santa Barbara	57	58	4,525	4,408		117
Santa Clara	76	80	13,171	12,945		226
Santa Cruz	54	55	5,250	5,279	29	
Shasta	93	93	3,302	3,386	84	
Sierra	23	22	1,006	902		104
Siskiyou	73	76	2,846	2,836		10
Solano	54	54	4,500	4,790	277	
Sonoma	133	132	8,500	8,580	80	
Stanislaus	52	51	2,371	2,442	71	
Sutter	37	38	1,275	1,262		13
Tehama	63	63	2,624	2,595		29
Trinity	16	16	721	680		41
Tulare	129	102	7,109	5,403		1,706
Tuolumne	33	33	1,474	1,459		15
Ventura	46	47	3,148	3 354	206	
Yolo	52	52	3,478	3,604	126	
Yuba	40	40	2,144	2,088		56
Glenn	38	38	1,459	1,397		62
Madera		30		1,334	1,344	
Riverside		53		3,996	3,996	
Kings		26		1,905	1,005	
Total			294,033	302,474	15,823	7,382

Some Unspoiled California Country.

ADAPTED FROM GOLDTHWAITE'S GEOGRAPHICAL MAGAZINE.

BY CHARLES HOWARD SHINN.

In the new age of Geography, when complete topographical surveys precede all scientific map-making, the world soon wakes to the fact that the chief physical beauties of California are in its diversified surface, its foothills, and small but lovely valleys, many of them as yet unknown except to a few settlers. There is now a movement well under way to secure a new topographical survey and contour map of the entire State. It is backed by the University of California, the Leland Stanford Jr. University, the Technical Society, the Academy of Sciences, the Science Association, the Sierra Club and a large number of leading Californians. The State legislature has been asked to appropriate $25,000 annually for ten years; the Federal Government will appropriate an equal sum, and the work will be done by the United States Geological Survey, which is now engaged independently upon extensive surveys in the Sierras, only partial results of which have been published. Their scale is one inch to two miles, but the present plan proposes, in the more settled parts of the State, to adopt the publication scale of one inch to the mile.

With the large mountain areas now reserved from settlement, and others as large that are likely to be reserved, the future place of California as a tourists' paradise seems assured. There are the rich and populous valleys of the lowlands, full of orchards and gardens; the foothills equally fruitful but differently planted; the forest-clad mountains rising into snow-clad peaks. But everywhere in the mountain land the valleys are scattered, and many of these, when surveyed, named, and made accessible, will become famous for picturesque beauty.

California has fifty-seven counties and a total area of 158,360 square miles, or 102,150,400 acres. Until there is a complete topographical survey, we cannot accurately determine the percentage of arable lands. Mountain vales under the names of "flats," "benches," "hollows," and many other local terms besides the usual one of valley exist by the thousands, some of them in deep forests, some as open as prairies, some hidden far down between the hills, and others lifted high on the shoulders of mighty mountains. The largest of these valleys are but little less in size than the smaller of the famous groups of

tree-planted valleys of the State; the smallest of them are hardly large enough for a single homestead. Chains of such valleys lie about many of the peaks, often at different levels, with gateways through each rim of hills; so that if one climbs to the crest of the mountain, almost any sunrise, he can watch a long gleam of gold slanting down from rim to rim across the valley pockets, full of white land-fog slowly breaking away and slipping downward from one vale to another, until the whole series of hill-stairs, with the bits of level between, is clearly revealed, while the broad plain far below—Sacramento, San Joaquin, or Salinas—is still a white floor of mist.

The valleys that most people think of when one speaks of the "Valleys of California," are only about twenty in number. The following list will serve to show approximately the area, in miles, of the larger valleys of the State:

San Joaquin, 11,500; Sacramento, 6,500; Los Angeles (with San Gabriel and tributaries), 1,800; Antelope, 1,500; Owen's River, 1,400; Madeline Plains, 1,250; Salinas (with tributaries), 1,200; Honey Lake, 1,000; Santa Clara (of Santa Clara, Alameda and San Mateo Counties), 700; San Bernardino (and tributaries), 500; Clear Lake, 450; Surprise, 400; Santa Clara (of Ventura), 350; Santa Maria, 300; Scott, 280; Round, 250; Santa Barbara (and tributaries), 220; Sierra, 200; San Fernando, 200; Santa Rosa (and tributaries), 150; Napa, 120; San Ramon, 100; Livermore, 85; Los Alamos, 80; Capay, 80; Pajaro, 70; Santa Inez, 60; Lompoc, 60; Sonoma, 55; Green, 50; Vaca and Pleasant, 30; Total, 30,940.

It would be very easy to add enough valleys of the cultivated, easily accessible type to bring this total up to 40,000 square miles, possibly to thirty million acres or a little more. The great barren plains, the Mojave, Death Valley, and the Colorado, have not been included, though portions of them are now being irrigated, and more cultivation will certainly be possible there. But the valleys that I have had most in mind are the small, pocket-like valleys ranging in elevation from near the sea-level to ten and twelve thousand feet above the sea. Only the hunters, fishermen, botanists, and summer campers in the remote wilderness know a tenth part of the lesser valleys with their many beauties and local attractions, such as springs, lakes, water-falls, caves, pictured rocks, Indian traditions, or quaint stories of pioneer days. The pioneers themselves who still remain, in many cases, on the "clearings" they began forty years ago, are of unfailing interest to the visitor. Like the valleys of the Alleghanies, these hun-

dreds of small valleys of the Sierras and Coast Range, are developing unique traits of character that will delight the hearts of many a future novelist.

Physical Athletics in Colleges.

Francis A. Walker in speaking to the subject of "College Athletics" comes to the following conclusions:

One of the first things which should receive the attention of all lovers of fair play is the complete abolition, once and for all, of the unsportsmanlike system of organized cheering by great bodies of collegians grouped together for the purpose, with chosen youths of peculiar gesticulatory graces and pre-eminent lung power to start the movement and "deacon off" the shouting. Such a line of conduct, thoughtlessly resorted to in the heat of partisanship, is unworthy of educated men. It is unfair to the visiting team, who, by all the laws of courtesy, are entitled to special consideration, and it comes very close to the line of ungentlemanly action.

Here at Harvard you have seen many a renowned champion put off athletics as he entered the law school or the medical school. In and after the professional school, whether that be a school of law, of medicine, of divinity or of technology, there should be no representative teams.

The principle of competition and championship should be dropped. Individuals should continue at their pleasure, to play tennis, or cricket, or football with their classes, with private clubs, or in town and country matches, or, if teams be formed in such schools, they should not be regarded as carrying the honor of their institutions around with them. Such teams should not expect victory. They should play for exercise and for the the fun of the thing, and should accept their inevitable beating with serenity and good nature, recognizing the fact that, since they have taken up the serious work of professional preparation for life, they no longer have the time or the strength at command to make and keep them champions.

METHODS AND AIDS.

Theological Life of a California Child.

BY EARL BARNES, PROF. OF EDUCATION, LELAND STANFORD JR. UNIVERSITY.

This study is not intended in any sense as an inquiry into a child's religious life and feeling. It is intended simply to show the theological atmosphere in which California children live, and their mental attitude towards this theology at different ages.

In any study of the development of the mind we must understand the theological, religious, moral, political, social, intellectual and æsthetic atmospheres in which the development takes place, and in any attempt to affect the civilization of our own time through education we must know what these atmospheres are to-day, so this is a broad study in education; to train any particular child we must know where he is subjectively, and how he is related to his world of ideas, and so this is a study for the practical school man.

The data on which the study is based are:

I. 1091 compositions written by children from six to twenty years old in the various schools of California, on the subjects of Heaven and Hell. They were simply given the subjects and asked to write compositions in the presence of the teacher, without suggestion or comment.

II. 16 reminiscences prepared by adults, in which they tried simply to recall and state their early beliefs.

III. 27 studies on young children, made by mothers and teachers through conversations, working along the lines of this syllabus:

God—Where is he? What does he do? Why cannot we see him?

Death—Why do people die? Where do they go?

Heaven—Where is it? Who goes there? What do people do there? What will children have there?

Hell—What must a person do to go there? What is it like?

Angels—What do they do?

Ghosts—Why are people afraid of them?

Witches—What can they do?

Prayer—Why do we pray? What do we pray for? Why do we not always get what we pray for?

Religious Ceremonies—Why do we celebrate Christmas? Why do we go to church?

Every variety of faith was represented in the papers,—Catholics, Methodists, Presbyterians, Universalists, Christian Scientists, Mormons, Baptists, Adventists, Spiritualists.

With only two or three exceptions the children treated the questions seriously, and the papers bear evidence of honest effort to express real beliefs.

The data were collated in the following groups, suggested by a study of the papers :—God, his appearance and activities ; angels, their appearance and activities; the Devil, his appearance and activities; heaven, its location, its inhabitants, and their appearance and activities; indications of a critical attitude; acts which take people to Heaven; acts which keep them out of Heaven. Since the children were not answering any set questions, we cannot state what proportion accepted any particular idea, but only how many of the children who mentioned an idea accepted or rejected it.

In studying the data, an attempt was made to bring together the theological conceptions expressed in the compositions, and then to determine the attitude of the children toward these conceptions.

The central figure in the theology is naturally God. The pictures drawn of him are often misty and indistinct, but more than half the papers represent him as a great and good man. He is so large that "He could stand with his feet upon the ground and touch the clouds with his arms upraised." He is "A man that has six hands and feet and eyes ;" or, "He is a huge being with numerous limbs spread out all over the sky."

He is generally an old man with a long white beard and flowing white garments; often he is represented as having wings and a crown on his head. He is most often described as being good and kind; the stern quality is seldom apparent, but the whole figure is shadowy, unreal and indistinct.

A considerable number of children speak of him as being able to do anything, as being everywhere, and as knowing everything. Omnipresence seems hard for the children to conceive, and this probably accounts for his being represented with several heads and members. A girl of eleven says: "He can even go through a key-hole or make himself as small as a pin."

Omniscience is easier; "God can see everything you do and everything you say even if you are inside a house." "I have thought and been told that he can see through anything; it makes no difference if it is iron, steel, glass, wood or anything." Many of the children

feel that God is watching them and some say "He writes it all down." A boy of thirteen adds: "I thought when I was small that if I was not good God would drop something on me and kill me."

Omnipotence is mentioned by many children, but there are few concrete instances given, one girl of twelve says that "God could have an earthquake at any time." His activities are seldom discribed; less than five per cent. of the children speak of him as ruling the universe, making things grow, or caring for our material needs. One boy of ten says in perfect earnestness that: "God is bossing the world." But the management of the practical things of the world is generally left to the angels.

Christ is seldom mentioned, and his relation to the Father is rarely thought out; where it is, in one-fourth of the cases, the relation is reversed and God is spoken of as the son of Christ. The Trinity is mentioned by only two children. Christ is mentioned as our Redeemer by some twenty-five children.

Heaven is generally, even with children up to the age of twelve and beyond, simply an improved earth. A girl of twelve furnishes the following typical description. "Heaven is a beautiful city, high above the clouds, where everything is beautiful. I think that Heaven must be perfect. The gates are pearls and the walls are formed of jewels, and a beautiful, calm, river clear as crystal, flows through it before the throne of the King of Heaven. Our friends who have died and gone to live there, now serve God, play harps and sing praises to their Maker. The children sing songs of praise also and serve him."

More than five hundred children locate heaven in the sky, in the clouds or up. The next most common location is "Where the good go" or "Where God is," while a few say "It is on the earth," "All about us," "On some star," or "In the East," "And no one in a balloon could reach it, it is so far away." More arguments are produced to prove the location of Heaven than to prove any other one point. Christ, they say, ascended, Elijah went up, and several close the argument by saying "Besides where else could it be."

Among those who are in Heaven are generally mentioned angels, then God, then the redeemed and Christ; a few mention dead relatives, the saints, Santa Claus, and unborn babies.

Heaven is most commonly described as "A beautiful place," but large numbers describe it as a city, a mansion, a palace, a fine house, a garden or park. It has streets and gates, plants, flowers, birds and trees. The concrete particular most commonly mentioned is gold.

The streets are of gold, the walks are of gold, the houses are of gold, and one boy has the angels eat gold bread. Several say there is no night; and opinion is about equally divided as to whether there are animals in heaven.

The redeemed and the angels are generally the same; over five hundred children mention their having wings; nearly the same number speak of them as looking like people dressed in white; a considerable number say they are women, because they never heard of any men being angels, while a few say they are fairies, birds, ghosts, or little babies. Several think of them as always small, others as having "just babies' heads, and wings."

The appearance is sometimes carefully described, as when a girl of thirteen says: "I think they wear white gowns shirred around the neck." And she adds: "I should think the boys and girls would wear their hair alike." Another says: "I thought angels were all the same size, that even if before they died they were fat they grew thin."

The activities of the redeemed, or the angels, furnish the most difficult detail in the children's theology. Several say they do not know what the angels do; but most of the papers represent them as flying around, playing on harps and singing praises to God. Sometimes they are said to help God, and a very few have them help the people on earth. Children of twelve or thirteen often mention the monotony of the life. Thus a boy of fourteen, after discussing Heaven as a place of singing and praise, concludes: "I suppose they will get tired of living this way all the time, anyway I would if I went there. I would like to visit Heaven for a short time." Another, a boy of ten, says: "Angels do not sit down all the time, they fly around some of the time and they sit down some of the time." Still another boy adds: "The children which go to Heaven sit around and fly around till they get to be grown. I don't know whether they go to school there or not but I think they do, because they are so patient and good."

Many papers describe the people as praying, praising God, and walking about, and one paper puts it; "they appeared to be gathered in groups, conversing much as people do after church service is over, when there is another service to follow." To many, Heaven is an extended church service. Several mention the angels carrying the souls of the dead to Heaven and bringing babies to the earth.

Some of the children declare that the angels work, while an equal number say no one works in Heaven. To some of the children this freedom from work is a chief attraction. A boy of fourteen remarks:

"I suppose if I went there I would not have to take care of the baby, chop wood or go to school." A girl of thirteen gets over the work problem by declaring that children in Heaven get wisdom without going to school, "and they are very wise."

To the little children and to some older ones, Heaven is a place where you do nothing, have everything you want to eat, and to play with, and are always perfectly happy. It is a park where one goes to hold a picnic. It is a reservoir of good things. As one boy says: "I wish God would send me some of the playthings of the little angels that are dead."

One cannot help wondering whether these two types of Heaven are not drawn from the Sundays the children have known. The one somewhat severe and restrained, and the other a free day in the open country side.

The evil spirit and his abode are pictured far less often and with less detail than the abode of the blest, but there is much greater uniformity in the description.

The general type of devil is well described by a boy who says: "I thought the Devil had a man's head with a long, hooked nose and pointed chin, with an ox's ears and horns. He had a man's body and one leg like a man and the other like an ox. He had a tail with a ball of three points at the end. He carried a spear with three prongs the same as his tail. He could spit fire and had a tongue like a snake." Often he is black, sometimes red. Three or four speak of him as a fallen angel, a few as a serpent or monster. His activities are tempting and fooling people, and killing and burning people. Some say he bites, scares people, or carries off children. Generally, however, the children do not go into detail about him, but simply say he is a bad man who tempts people.

Hell is located under the earth, or below us. One puts it below China and one in Heaven. It is a place of fire, some say like a furnace, and a very few add snakes and darkness; but Hell and the Devil play a small part in the compositions, and disappear almost entirely from the compositions written by children over ten years old.

In all this scheme of theology natural phenomena plays but a small part. The stars and the moon are a very few times spoken of as lighting Heaven. In two or three cases the clouds support or hide Heaven. Two or three speak of God as like a cloud, and one says the Devil is like smoke; but there is little connection in the compositions between the celestial hierarchy and the mountains and hills, the

plains and woods, the deserts and oceans of this world. Thunder and lightning and birth and death are hardly mentioned in these connections. God is certainly not seen in his works by our ordinary school children.

To summarize briefly the theological ideas of California children we should say: The world of spirits is for the most part attractive; there is very little dark and forbidding imagery; terror is unknown; the ideas are generally vague; and the standard theological beliefs are often quoted in ways that show that the children have had little or no teaching.

What attitude children of different ages take towards this theology is a question of great importance to the educator.

The young children under six, examined by mothers and teachers, accept what they have been told without question or comment. They, however, recast their theology into forms that appeal to their experiences and their modes of thought. The spirit world is simply a beautiful play ground where children have what they want; God is a more serious form of papa; the angels are play-fellows, and Satan is simply a "boogie," while Hell is a dark closet.

From seven to ten there are occasional vague questionings; but under ten years old there are few indications of a questioning or doubting frame of mind. From that time on, however, questions arise; the children try to reason things out and to relate their theology to what they have learned through experience and through their studies. This critical spirit seems to culminate at thirteen or fourteen; and the criticisms are far more persistent and severe at this time than later. Of course, in this work, as in all studies on children, one must recognize the fact that some children develop much more rapidly than others, so that there are many exceptions, but there is a clearly marked difference between the compositions of children of eleven and of thirteen which must strike even the most careless observer. One sees this difference even when the children are doing the same grade of school work.

Forty papers were selected from one thousand to illustrate the critical attitude. Ninety per cent. of them were written by children from twelve to fourteen years old.

The critical spirit first appears in an effort to place the responsibility for the doctrines stated in the compositions. Thus at eleven and twelve there begins to appear in the compositions such phrases as, "I think," I've been told," "my idea was," "the Bible says," "I was taught in Sunday school," or "they say." By thirteen or four-

teen these phrases become: "we imagine," "I used to believe" "I doubt," etc.

A girl of thirteen modifies her statement as follows: "we cannot exactly tell who is in Heaven, but it is supposed that every one that serves Him probably goes there." And a girl of twelve thus tries to place the responsibility for the statements she offers; "*If* Heaven is a place where *you are said* to be always happy, *I think* it must be very beautiful. One of the most lovely things to beautify a place is flowers. And *it is my opinion* that we shall find lovely flowers there. *It is said* that the people that go there, who are angels, have wings and dress in white; of course, *I have never seen them, so I do not know* exactly how they do look."

The most common form of criticism is that which appears in efforts to harmonize theology with experience. Thus one boy says: "I used to believe that the air was full of bad spirits which would hurt you, but I don't believe it now because they don't hurt." A girl of fifteen says: "I don't see how people can stay in Heaven forever without nothing to do except to pray and sing, but people might be different there from what they are here. Here they have thoughts besides those of God and Heaven, and I don't suppose they do there. That is another thing about their enjoyment, they don't have the worldly things to worry about, they don't have any ambitious wants or any of the things the people on the earth do."

The mere desire to exercise the critical judgment seems at times the only reason one can find for the questions raised. Thus a boy of fourteen says: "I thought that the Devil and all these other things were just as it says they are in the Bible from which I got my impressions, but beyond that all is a mystery. My idea of Heaven has changed, and now I think that Heaven is space, but if that is so how could the heavens open as it says they did in the Bible?" And a boy of fourteen says: "I think it is strange that when one dies his soul goes to Heaven if he is good, and if he is bad his soul does not go to Heaven, and I don't see what good it does for your soul to get to Heaven, because when you are dead, you know nothing of it."

The children at this age also try to make their theology harmonize with their humanitarian feelings and their sense of justice. One boy of fourteen says: "I think when a mother sees her son if such things happen left among the bad she will not be very happy for a while." Frequently the children of this age say that they do not believe that savages and babies will go to Hell, while very many who

accept the standard theology for God, the angels, and Heaven, declare that they do not believe that there is any Devil in Hell. This, of course, may be due simply to their teaching, but such sentiments seldom appear in compositions by children under eleven or twelve years old.

A very few children assert their disbelief in any form of theology; but these few atheistic statements are more dogmatic than the statements of orthodox Sunday-school children and bear all the marks of having been simply accepted from parents or others. For example, a girl of eleven writes, "Heaven is our dear mother and father and Heaven don't help to grow, nor he don't give us bread or anything;" and again, "when people die they put them in a hole and put some ground on them and leave them there * * * and they don't go up in Heaven or any place; they always stay in that same place."

After children pass fifteen they generally avoid telling what they believe by saying: "I used to believe;" or "when I was little I believed." If they express their present beliefs they raise very few concrete doubts. They use more abstract terms, describing God as a great, all-powerful spirit and Heaven as a beautiful abode of the blest; angels are celestial spirits and the Devil is the great evil inflence in the world.

One cannot help feeling that they have accepted an abstraction and a name and have temporarily, at least, laid the questions that perplexed them aside. Certainly from fifteen to eighteen there is no such persistent exercise of the critical judgment in matters theological as there is between twelve and fifteen.

In all these reasoning processes the Bible is only occasionally referred to as an authority, and in citing it the children show a very great ignorance of the most common Biblical allusions.

Incidentally this study throws a strong side light on what children are taught to consider good and bad acts. Naturally most of the children say that to go to Heaven we must be good, and that if we are not good we do not go to Heaven; but in many cases they specify virtues and vices supposed to be especially prominent.

Next to being good, the virtue most commonly named is obeying God, and then come in order of importance: "keeping the commandments," "believing in God," "loving God," "praying," "trusting God," "obeying God," and "telling truth;" less than one per cent. of the children mention "going to church and Sunday-school," "read-

ing the Bible," "keeping Sunday," "working hard," and "being baptized."

A boy of four says: "you must be good on the earth and be quiet," while a boy of ten sums up the virtues with: "God wants you to obey your parents and to do what they say and he wants you to be polite to everybody you meet on the street." The whole career of the good man is summed up as follows by a boy of twelve: "the good man will first join the church on probation and then in six months he will join the church and be a member. He will push the work of God along as much as he can, help the poor and the church, and probably be successful in business. He will die a happy man and go to Heaven."

Among the bad qualities, next to simply being bad, the children mention "disobeying God." Very few concrete sins are mentioned; less than one in a hundred mention "swearing," "lying," "talking dirty talk," "drinking" and "using tobacco."

A boy of twelve says: "God takes people to Heaven who don't drink eny likers of eny kind, or choe tobackgo or smoke tobackgo;" and the boy who summed up the good man's life does the same for the bad man: "The bad man commences smoking cigars and then drinking and gamboling until all his money is gone. He will try to get money from his father, but he will give him a little and tell him not to come back any more. He goes away and spends all of it and lives half starved until he dies. This man will go to Hell."

Many allusions throw light on the sources of the theological ideas which the children hold. Many say: "my mother has told me," "I have heard in Sunday-school" or "I have heard in church;" not one mentions what his teacher has told him. Evidently the effort to secularize our schools has been but too successful. One boy says he got his ideas of the Devil from a Punch and Judy show. Two say their ideas of the Devil came from the pictures on deviled ham, several mentioned the hired girl as authority, and a large number say their ideas came from pictures.

From this study of the data in hand it would seem that we could safely draw the following conclusion:

If young children are to be taught a theology it must have an anthropomorphic and realistic form. We may teach that God is a spirit, but the child's mind at once invests him with a human form and human attributes. If we do not furnish exalted and worthy imagery the child fills out the form with random pictures, Punch and Judy impressions, and images from grocery labels.

Since pictures furnish so much of this imagery, children should be surrounded with worthy pictures, such Raphael's Sistine Madonna.

Through confidential conversations with the child, grotesque images should be detected and corrected.

Many California children seem to be ignorant of the most common and most generally accepted theological conceptions of Christian people. They should be given this knowledge, if for no other reason, because it is essential to an intelligent understanding of the literary and artistic life of our times.

The period of the most intense critical activity in theological directions seems to be the period of puberty. Some special effort should be made at that time to assist the child in re-arranging and adjusting his philosophical and theological conceptions. In the schools literary, historical and scientific subjects should be dealt with in a large and philosophic spirit. The child's desire to organize and unify his universe should be encouraged, not discouraged. Later he will settle down to detailed work.

The general absence of references to nature would seem to indicate that children are accepting our scientific explanations as final.

It would seem that the schools should lead them to feel and realize that greater power which lies back of our superficial explanations, and makes this a sane universe.*

A Problem.

BY C. M. DRAKE.

The village of Cuyamaca has long been noted for its arithmetical sharps, and ever since I have been teaching there I have been solving the same problems that Euclid used to amuse his grandchildren with. I have assured Judge Wiseman that the frog which for centuries has been climbing up 3 feet in the daytime and tumbling back 2 feet every night would be 13 days in getting out of that 15 foot well. I confidently told Surveyor White that a triangle with sides 8 ft., 5.375 ft., and 2.625 ft., would not contain enough land to bury a ghost. I computed the loss for Store-keeper Brown, who had the man come in with a counterfeit $20 bill and buy a $5 pair of boots. I built a fence of 10 ft. rails ten rails high around a square field that contained as many acres as there were rails in the fence, so quickly that it made their heads swim. I measured out various quantities of milk with only an

*Much of the work for this article was done by Miss Ora Boring.

8 qt. and a 5 qt. measure. In fact, I had successfully passed the usual mathematical examination for Cuyamaca district, when I took it into my head to give them a little problem.

After assuring Carpenter Brown that a ladder standing upright against a wall must be one foot long to be pulled out one foot at the bottom and lowered one foot at the top, I said, "Gentlemen, I have a little problem for you, which was given at the San Diego teacher's examination last June. *'If I buy San Diego 6% bonds at 10% premium, get the interest yearly for 15 years and then get the face of the bonds, what per cent will I make?'* "

Six gray heads bent over six pieces of Store-keeper Brown's wrapping paper, six pencils scrawled curious hieroglyphics, and six voices promised the answer to that little example on the morrow.

The next evening the Judge said to me, "That is quite a simple little problem you gave me yesterday. I just found the amount of a hundred dollar bond for 15 years @ 6% which was $190. Take away $110 and you have the $80 real interest left. Divide by 15 and there is your 5⅓%."

"You have forgotten that your first amount invested was $110 and that more than $100 should bear interest," I replied.

"That's right, he should divide by dollar-ten," assented the store-keeper.

"But it was only the first year the investment was $110," I objected. "After the first year it gradually dwindled away until it was less than $101 the 15th year."

"To be sure. It averaged $105," said the Judge.

"Not exactly. It is $105⅓," said the Surveyor. You see he pays off that $10 in 15 years, or 66⅔ cents every year, and so you have as his investment the 8th year (which is the average) $105⅓. Now if you divide 5⅓% by 1.05⅓ you will get the true answer."

"Not quite," was my prompt reply. Your statement is wrong, and your answer is nearly .03% too great. You do not pay off 66⅔ cents every year but an average of that. You really pay off 46+the first year and almost 92 cents the last year. By your method the interest would vary every year. $105⅓ is not the average investment, which is $105.27¼ nearly. And finally you do not divide 5⅓% by the average investment to get the true interest. You do not seem to realize that this is a simple little partial payment example with unknown interest and known final amount."

There was a painful silence for a full minute and then the Surveyor said, "But the Cal. Advanced Arithmetic don't do such examples your way, nor does any other arithmetic I ever saw."

"So much the worse for the arithmetics," said I very coolly. "My method proves."

"And what is the true answer?"

"That, I am not going to tell you," I answered. "You have been giving me problems hoping to stall me, ever since I have been here. Now I give you one that contains no catch puzzle and you are bogged down up to your ears. When you all promise me never again to try to stick the school teacher with one of your puzzles, I may tell you the answer. But not before." "That young man is getting too smart for this Cuyamaca school," said the Judge solemnly as I departed.

The other two trustees nodded an emphatic assent, and the Cuyamaca school will be vacant some time next month. If one of our arithmetically sharp teachers will give, through the JOURNAL, a correct solution of this problem, he will receive the heart-felt thanks of the Cuyamaca trustees, and may receive an offer of the school at the highest wages they can afford to pay.

[NOTE:—Will not some of the readers of the JOURNAL come to the help of the Trustees, treated so cavalierly by Mr. Drake.—ED.]

A Problem in Threes.

(A Recitation.)

If three little houses stood in a row,
With never a fence to divide,
And if each little house had three little maids
At play in the garden wide,
And if each little maid had three little cats
(Three times three times three),
And if each little cat had three little kits,
How many kits would there be?

And if each little maid had three little friends
With whom she loved to play,
And each little friend had three little dolls
In dresses and ribbons gay,
And if friends and dolls and cats and kits
Were all invited to tea,
And if none of them all should send regrets,
How many guests would there be?

—*St. Nicholas.*

Friday Afternoons.

IDA L. SIMPSON, UKIAH.

In no other profession is there such danger of falling into ruts as in school teaching.

The teacher, surrounded by minds of an inferior growth, and confined to a certain unavoidable routine, naturally narrows, unless strenuous efforts are exerted to overcome this tendency.

One day in the week teachers should set aside for *stretching*; Friday offers inducements for augmenting this growing process; being the last day of the week, when teachers and pupils are tired and restless, a change of work is a recreation for both.

Then, a pleasant ending to a period of hard work acts as a tonic on both mind and body, causing the petty trials and worries of the week, to dissolve like dew before the sun.

If the teacher realizes that the ultimate object of this change of work is improvement and not simply amusement, then, these Friday afternoons may be made golden opportunities for widening the field of her usefulness and influence.

TABLEAUX.

Children become very enthusiastic over tableaux; these may be taken from history, geography or romance, and as an impromptu exercise they are highly satisfactory. Past lessons are impressed and future improvement inspired; for each "Committee on Entertainment," desiring distinction preëminent, searches for material that will work up into picturesque effect, and yet be a true representation of some character, scene, etc.

CHARADES.

Next on the list of impromptu exercises come charades; these serve as a delicate test of the memory of a class.

Geography affords a wide range for this exercise, pupils particularly delight to represent the different countries; they adopt the national costume, fashioning it of such material as may be at hand.

It is needless to say that but little time and no expense is necessary in getting up either tableaux or charades. A simple knowledge of the subject, combined with a little executive ability, will insure success.

PARENT'S DAY.

Once in a while we indulge in a reception afternoon; to this reception the parents are bidden by neatly written invitations.

This requires a little extra work, but is enjoyed by everyone so much that we feel amply repaid for the trouble.

On these afternoons we provide tea and cake, or lemonade and cake, and on one rare occasion last term we indulged in *ice-cream*, one of the patrons of the school, from the depths of his honest heart volunteering to make this delicacy for us; ours is a suburban institution and such delicacies are thoroughly enjoyed and appreciated.

On these afternoons I have a table spread with the work done by the pupils during the term; for we destroy nothing; every map, essay, picture, and exercises of all descriptions being saved for these days. And the pains with which all work is prepared, and the pride which parents take in examining and praising the work, convinces me that it is wise to have "Parent's Day" in every school.

These are but a few of the ways that a teacher may employ in warding off cob-webs and defying rust; originality will develop with practice, and the progressive, wide-awake teacher will soon learn to let no opportunity slip, that will make this day the happiest, most important day of the week.

Words and Phrases to be Avoided.

Had rather, for Would rather; Had better, for Would better; Posted, for Informed; Depot, for Station; Try and go, for Try to go; Cunning, for Smart; Above, for Foregoing; Like I do, for As I do; Feel badly, for Feel bad; Feel good, for Feel well; Expect, for Suspect; Nice, or real nice, used indiscriminately; Funny, for Odd or unusal; Seldom or ever, for Seldom or never; More than you think for, instead of More than you think; Nicely, in answer to a question as to health; Just as soon, for Just as lief; Guess, for Think; Fix, for Arrange or prepare; Real good, for Really good; Try an experiment, for Make an experiment; It storms, for It rains or it blows; Not as I know, for Not that I know; Every man or woman should do *their* duty; A party, for A person; Healthy, for Wholesome.

A Curiosity.

Here is a curiosity that will interest the class in Higher Arithmetic: Multiply a number composed of the nine digits, 123,456,789, by 45, and the product is 5,555,555,505. Reverse the figures in the multiplier 54, and the product is 6,666,666,606. Reverse the multiplicand to 987,654,321, and multiply by 45, and the product is 44,444,

444,445. Reverse the multiplier to 54, and the product is 53,333,333,334. The first and last figures are the multiplier.

Use half the multiplier or 27, and the product is 26,666,666,667. The first and last figures are the multiplier. Reverse the figures of the multiplier to 72, and the product is 71,111,111,112, the first and last being the multiplier.



A New California Industry.

Show the picture to your pupils. Ask them what it means. Have they ever seen anything like it? In what part of the State was it taken? To what uses is the product put? Is the work pleasant? What is there about the picture unlike the usual working scene in a field?

Having drawn out their ideas about the picture, furnish them with such information as you may have about it and let each, then, write out for you what the picture means to him.

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

The Organization and Management of Schools in Cities.

The rapid increase in the number of cities and their marvellous growth in population, make the problem of municipal government one of grave concern. The facilities for the organization and furtherance of schemes of public plunder, presented by a compact population; well-meaning citizens engrossed in the cares of business where competition is keen; the idle and vicious easily massed and ready for mischief; all these present capabilities of evil that may well arrest the attention and engage the best thought of the times.

No department of municipal administration is more subject to abuse, and when abused attended by more direful consequences, than the administration of the schools.

The gravity of the problem will manifest itself upon an inspection of the accompanying table.

Prominent educators and students of Economics are giving the question special attention. In San Francisco the Board of Education is busy with it and the press in the main is active in support of what is believed to be a move in the direction of genuine reform.

TABLE SHOWING GROWTH OF AMERICAN CITIES.

Census.	8,000 to 12,000	12,000 to 20,000	20,000 to 40,000	40 000 to 75,000	75,000 to 125,000	125,000 to 250,000	250,000 to 500,000	500,000 to 1,000,000	1,000,000 to 1,100,000	More than 1,500,000	Total.	Per cent. of total population in cities of more than 8000.
1790	1	3	1	1	.....	.....	.....	.....	.....	.....	6	3.3
1800	1	.....	3	2	.....	.....	.....	.....	.....	.....	6	3.9
1810	4	2	3	.....	2	.....	.....	.....	.....	.....	11	4.9
1820	3	4	2	2	2	.....	.....	.....	.....	.....	13	4.9
1830	12	7	3	1	1	2	.....	.....	.....	.....	26	6.7
1840	17	11	10	1	3	1	1	.....	.....	.....	44	8.5
1850	36	20	14	7	3	3	1	1	.....	.....	85	12.5
1860	62	34	23	12	2	5	1	2	.....	.....	141	16.1
1870	92	63	39	14	8	3	5	2	.....	.....	226	20.9
1880	110	76	55	21	9	7	4	3	1	.....	286	22.5
1890	147	111	86	33	10	14	6	1	2	1	411	29.4

Not only are the patriotic residents of cities interested, but friends of popular education throughout the land, recognize that the supreme test of the stability of the system will come in cities.

The city of Cleveland has at this time focused upon itself public attention because of its unique and radical plan. Addressing himself to the general subject, and referring to the Cleveland departure, Superintendent Andrew Draper, of that city, sums the matter up in the June number of the *Educational Review*, as follows:

"In the meantime, it is incumbent on us to understand the general principles upon which the good government of the schools in great cities rests, and to declare the lines upon which reforms must proceed.

"In my opinion these are the following:

"First. The elimination of politics from the selection of school boards. Dr. Philbrick rightly characterized this point as the supreme educational problem, but we shall not cease hoping that it may be solved. Special school elections and appointments by public officers do not offer a complete solution, but are certainly in that direction. Much depends upon the state of public sentiment, which should at least demand the complete elimination of politics from school administration, if not from school elections; and no opportunity for asserting the principle should be lost.

"Second. Small school boards with members representing the whole city and not wards or districts.

"Third. The complete separation of school administration from municipal business. This is imperative. Laws which put the schools at the mercy of a Board of Aldermen are unsound in principle and deplorable in their operation. Even the determination of the sum to be levied for school purposes should not be left to a common council, which, by legislation and by usage, has come to represent, and has become representative of, interests not in harmony or sympathy with school administration. If there is a finance board or tax commission which receives estimates from all sources and finally determines the amount to be levied, it is not so objectionable that the school estimates should go with the others to this board, for such a board may be assumed to be independent of all special interests and representative of the best sentiment of the whole city. But the only sound rule is that school administration shall be entirely independent of municipal business. The two do not rest upon the same foundation; the power which manages each proceeds from entirely different sources, and the object and purposes of each have nothing in common.

"Fourth. The school system of a great city must not only have an autonomy of its own, but its administration must be departmentalized. Material affairs should be entirely separated from the work

of instruction. Officers must have ample authority, be properly paid for services of high grade, and held to personal accountability. If there is cause for complaint, there should be a place to make the complaint, and an officer who can neither shift nor shirk responsibility. The Cleveland plan, which creates a salaried officer directly responsible to the people for the proper care of all their school property, and for the proper management of all the business affairs of their school system, is, in that regard at least, very nearly ideal. It is economical and businesslike. It will secure a responsible man, and it will insure the alert and careful administration of business interests. All subordinates and employés are amenable to him and to him alone. The man will not only have responsibility, but he will have independence and self-respect as well. On the other hand, the superintendent of instruction should not be burdened with any of the material interests of a great school system or with keeping records or accounts relating thereto; but he should be chosen with special reference to the work of instruction, and in that department should likewise have full authority, be given ample assistance, and charged with complete responsibility. Such responsibility is well-nigh overwhelming. To secure a teaching force numbering hundreds or thousands of individuals, all of whom are capable and have individuality and teaching power, and so to organize them as to get the best results from each, and then to lead and train them so that there will be harmony, enthusiasm, growth and continually increasing power, is a great undertaking; but under proper conditions it is not altogether impossible of accomplishment. Where teachers are appointed by school boards or committees or members thereof, or by ward or district trustees, its accomplishment is impossible. If superintendents are only allowed to nominate, and nominations are to be confirmed by a board or committee, other elements than the fitness of the candidate will of necessity be taken into consideration. If a superintendent cannot dismiss teachers, or change them about, as exigencies may require and experience suggest, without being obliged to advise with and secure the approval of boards or members who are looking for votes, or who are anxious to please friends, and who have no appreciation of the importance and delicacy of the questions involved, he will not do it at all. Every teacher knows that this is so, and every teacher knows why it is so. Every teacher knows also that there is no danger of his doing too much in the right direction. This is no reflection upon superintendents. To expect otherwise would be to expect more than that of which human

nature is capable. Comparatively few men have all the elements which adapt them to such service, and those who have can accomplish their undertaking only when given a position of such power, responsibility and dignity, as will give them the undisputed right of leadership, and will command the respect of their associates and subordinates and of the body of the people.

"These are the lines, as it seems to me, upon which reforms in the administration of the school systems of great cities must proceed. Such reforms should proceed more easily when we remember that schools do not belong wholly and alone to the communities in which they exist, but are parts of a State system which derives its existence and character from State legislation; and that the whole subject is one which claims the attention of all the reformers and the foremost statesmen of the country: for it is one which goes not alone to the material well-being, but to the intellectual life and the public security of the city, the State and the Republic."

Supervision.

[Excerpts from an address of Dr. Winship before the Educational Council of Connecticut.]

Supervision is a question of administrative economy, of grade of teachers, of quality of teaching. Whatever else the superintendent is or is not, he must be a man of affairs. He must be by nature or training a business man with conscience and courage to know that the city receives a good square one hundred cents' worth of work for every dollar expended. If he is not this and has other qualities that are of a higher order he should have a clerk or assistant who is all this. The superintendent may not have the instinct or training for economy, but supervision must have it. No amount of pedagogical, psychological, or philosophical wisdom will avail if there is not in the man or in his office business ability. In a city of any size the superintendent should not only not be required to attend to business, but he should no more be allowed to do it than to write the letters of the department with his own hand. It is little short of criminal for a $4,000 man to do the work of a $1,000 business agent or a $600 type-writer, but the supervisor must have economic instinct and business methods. * *

In the matter of economy as relates to all kinds of supplies and care of property, if he has no competent clerk or assistant his supervision must be close; but how in his supervision of teacher? Is he to supervise them closely and personally or through principals and

special teachers? If there is a supervisor of all the primary schools, a specialist in music, drawing, nature study, sewing, cooking, penmanship, etc., is he to reach the teachers through these specialists or directly? If the answer be that he should reach the pupils and regular teachers through the specialists the question arises regarding the principal. Should the superintendent regard the principal as a specialist directing the methods in arithmetic, geography, spelling, language, and other subjects for which there is no specialist or shall he regard him merely as a figure-head for the building to do the honors when there are visitors and to receive for advice boys who are disrespectful to their teachers?

There is no more important matter now before us than the relation of the superintendent to the principal. Is the superintendent to employ every teacher for the principal, to select every text-book, to determine every principle to be emphasized, every method to be employed, every device to be utilized? To what extent is he to run every teacher over in his mold, to train them to be his echo in methods and devices? Is he to aim to make them better teachers, or is he merely to get better teaching? In a word, is it the aim to make it possible to employ cheaper teachers without perceptibly lowering the quality of the teaching?

It must be confessed that there is a wide difference of opinion, as judged by the practice. It must also be recognized that circumstances alter cases; but wherever it is possible, wherever the principals are of a higher grade professionally than the teachers, wherever they will with hearty loyalty take the ideas of the superintendent and materialize them, it is the ideal way for a superintendent not to deal directly with the teachers. The superintendent should be of a higher grade professionally than the principals, and the principals should be of a higher grade than the teachers, and when in any way this relative superiority is not maintained, the efficiency of the system is weakened.

There is no justice or wisdom in allowing a school committee to select the teachers when superintendents and principals are what they should be, and if they are not, the school board ought to be heroic enough to get those who are. The school board ought to elect, and it ought also to keep an eye closely on the methods and success of the superintendent and principals in their selection; but it is a relic of barbarism for a school board to select teachers whom they may chance to prefer.

Teachers are to be selected to work with the principals. Loyalty

should be a prime requisite if the principal is what he should be. Just as the principals should be expected to be genuinely loyal to the superintendent, and the superintendent to the school board, so ought the teachers to be expected to be loyal to the principal. The superintendent should have his eye over a wide field and should know where good teachers are. First of all, he should know the towns from which he would on no conditions take a teacher. What blood is to stock, the city or town in which one teaches is to the ordinary teacher. As never before there is coming to be character in the teaching of cities and towns. A superintendent should from what towns he would never take a teacher, unless she was a grand exception; he should then know the order in which he would prefer the teachers of other cities and towns; he should then know from what buildings in those cities he would and would not take teachers. In much the same way he should estimate the graduates of the Normal Schools. In short, the superintendent should decide in a general way that which would be acceptable to him, and he should keep the principals, informed in these matters; but when it comes to the choice of a teacher it should be remembered that the principal has to be with the teacher and that he should practically choose the individual teacher with whom he prefers to work year and year. There is no high success in which the teachers do not work heartily with the principals any more than there is where the principals do not work with the superintendent. If all the new blood is genuinely loyal, the disloyalty of the old teachers or principals will soon disappear or be so exceptional that they will themselves disappear.

There can never be any satisfactory selection of teachers that results from machine methods. No diploma from Normal or Training school should make it sure that the candidate will receive an appointment; no more should a given per cent. in examination make selection certain. Who can estimate the educational wreckage that has resulted from the city training school when it is understood that any girl who takes the course is to have a school? She will have advantages—that is inevitable, is indeed desirable—but she should have no mortgage unless she is a success.

FROM the annual report of County Superintendent Beattie, of San Bernardino, we take the following interesting extracts:

"The present year has witnessed the completion of two High School buildings in the county; one in San Bernardino at a cost of

$75,000, and one in Redlands costing $20,000 that is designed as the wing of a building to which the main part shall be added later. Each of these schools expends about $6,000 per annum for current expenses, and an unusually large percentage of pupils who complete grammar grade work enter the High Schools for further study.

"It is the policy of San Bernardino county to establish High Schools only where strong ones can be maintained. In my opinion the practice of forming so-called High Schools where support must necessarily be small cannot be too strongly deprecated.

"The reputation of a place in educational circles depends, to a great extent, upon the quality of work done in its High School. Individuals, in our towns having schools of this grade, could in no way more effectually promote the welfare of the region than by forming the nucleus of an endowment for their High School, the income from which would supplement the liberal taxes paid by the people at large, and render possible a degree of efficiency in the work done that is not now attainable.

"An interesting experiment in the form of an attempt to give systematic instruction in vocal music in the ungraded schools was begun last fall.

"By the combined efforts of the trustees of about thirty districts a skillful teacher was employed, who visited each school once a month, giving lessons to the pupils and leaving instructions for the teachers to follow until the time of his next visit.

"The result has surpassed the expectations of the most sanguine, and persons examining almost any of the schools in the circuit visited will be surprised at the remarkable advancement made in one season of eight months."

Inventions or Discoveries.

Let the pupils distinguish between invention and discovery, and then decide which, if any of these, should be called discoveries:

1. The lightning rod. 2. The cotton-gin. 3. The steamboat. 4. The iron plow. 5. The reaper and self-binder. 6. The sewing-machine. 7. Vulcanized rubber. 8. The use of anesthetics. 9. The uses of petroleum. 10. The universal lathe. 11. The telegraph. 12. The telephone. 13. The Woodruff planing machine. 14. The monitor. 15. Westinghouse airbrake. 16. The typewriter.—*Western Teacher.*

The Institute season will soon be upon us, and we publish the following from *School Education*:

Some Slight Changes.

BY AN OLD-TIME TEACHER.

WHAT I HEARD IN INSTITUTES, 1873.	WHAT I HEAR IN SUMMER SCHOOLS, 1893.
Analysis, parsing and the correction of false syntax must not be neglected. They are our main reliance. Pupils must wrestle with Milton, Pollock, Byron and Gray, if they would acquire a taste for good literature.	Parsing and analysis must be banished from the literature class. "To parse a poem is as absurd as to make a chemical analysis of the Venus de Milo." The correction of false syntax brings bad models before pupils—it is a practice to be condemned.
Every teacher of penmanship should be able to analyze letters. Analysis must have a place in the institutes, so that there may be no excuse for its neglect even in the humblest district school. We who are placed over the schools must see to this thing.	No really first-class instructor now pays any attention to the analysis of letters. The days for drill on "right curves," "left curves," "straight slant-lines," etc., have passed and we can give our time to things of greater moment.
Guyot's, Apgair's, or some other good system of map drawing should have a place in every teacher's library, and be taught in all schools where geography is studied. The triangulation of a continent is the first step, and the time spent in learning it is not lost.	Map sketching by the eye alone must be the rule. Even a simple system of diagrams is highly objectionable, for the reason that pattern work is not what is wanted. "We would train the eye to quick and accurate seeing, the hand to easy and rapid sketching."
Every child must have a slate. The youngest pupils need slates for number work, for language, for simple lessons in drawing, and no really skillful teacher will attempt to get on without this aid.	Primary and intermediate classes should be provided with tablets, or scratch books, instead of slates. In the interest of cleanliness and quiet "the slate must go." "It is both nasty and noisy."

[From W. H. V. Raymond's *Educational Advantages of California.*]

"Before entering upon particulars, it may be said, first, in general, that the educational system of the State is not the outgrowth of narrow or provincial views, but a system founded in the beginning, and fashioned to the present time, by the sturdiest and most enlightened educational sentiment of the whole country. The best thought and experience of New England, of the great Middle West, and of the South

have gone richly into its life and character. The foundation of an incomparable system of primary and grammar schools was early laid by that incarnate enthusiasm from the Granite Hills, John Swett, a national name, as familiar in the educational circles of Boston as in those of San Francisco, where its owner resides. In the directing and inspiring personal agencies which have made the other departments of the California system what they are, the State has been equally fortunate. Higher education, as represented in the State University, has been largely shaped by the classical learning of President Martin Kellogg, from Connecticut and Yale, and by the scientific spirit and eminent scholarship of John and Joseph Le Conte, from the University of Georgia, whose original researches in the departments of physics and geology have given to their names a European as well as an American celebrity. These men stood reverently by at the birth of university education in California, rocked its cradle in infancy, and two of them still remain, keeping step royally with its vigorous manhood. In recent years Leland Stanford Jr. University, with its endowment of $20,000,000, and its distinguished President. David Starr Jordan, from Indiana, has brought to this department of education an access of new and abounding life.

And the poet, faithful and far-seeing,
Sees, alike in stars and flower a part
Of the self-same universal being
Which is throbbing in his brain and heart.

Our little lives are kept in equipoise
By opposite attractions and desires:
The struggle of the instinct that enjoys,
And the more noble instinct that aspires.—*Longfellow.*

Do, Re, Mi.

"Now tell me what comes after *do*,"
In most persuasive tones, I said;
The little maiden answered low:
"I think, thir, that it muth be *bread*."

Anna J. McKeag, in Wide Awake.

NORMAL SCHOOLS.

The Board of Trustees of the Los Angeles State Normal School have finally adopted designs for the addition to the existing building. The general size will be 80x180 feet exclusive of loggia and will be three stories in height, with basement in the south end for boilers, engine and fan rooms. At the northeast corner will be the main tower twenty-five feet square and rising 120 feet above the sidewalk. There are also two secondary towers, a square one 20x20 and a round one at the southwest corner twenty feet in diameter. The style of architecture is Romanesque.

The first floor will be used as a training school and has six large class rooms, connected by sliding partitions, several recitation rooms, cloak rooms, etc. The second floor is devoted to the Normal School and is similarly arranged. On the third floor is the assembly room, 80x100, 30 feet high, with inclined floor and stage 15x37 feet, with dressing rooms at back.

The building will be of brick and furnished throughout with electric lights, annunciators, etc. The cost is estimated at $60,000, furnishings $15,000 additional. The Board, consisting of Gen. John Mansfield, President, and Messrs. A. E. Pomeroy, T. P. Lukens, A. S. Davidson, F. P. Molyneaux, with Governor Markham, were practically unanimous in making the award.

It was a remark of Mr. Emerson's that the pupils are supposed to be taught by the teacher, but in reality they are taught by each other. That is really a great teacher who causes this teaching to become a power in his school—who recognizes and organizes it. If a hole in a rock is filled with broken pieces of quartz and a stream of water is allowed to rush in for several days it will be found that the rough fragments have become polished spheres. (It is in this way that marbles are actually made.) A teacher with fifty boys before him can teach them but little. The wise teacher sets them to teaching themselves. This is the high art of teaching. The answers given by pupils to the teacher's questions are often more instructive than the studied statements of the teacher.—*The School Journal.*

[From W. H. V. Raymond's *Educatconal Advantages of California.*]

"The organization and conduct of the State Normal schools have fallen upon men distinguished and equipped for their work. For seventeen years, from 1873 to 1890, the original school was under the direction of Mr. Charles H. Allen, whose normal school work began in Pennsylvania, widened into the principalship of the first Normal School of Wisconsin, and culminated in his distinguished service to the normal school system of California. In 1890 the principalship of this school fell upon its present head, Charles W. Childs, one of its early graduates, a successful author, and a man of marked ability. Ira Moore, graduating from both the Bridgewater, Mass., Normal School and Yale College—his whole life given to the study of educational science, expanding in Illinois into a four years' professorship in the State Normal School of that State, and in Minnesota into a seven years' principalship of the State Normal School at St. Cloud—has, from its organization, ably directed the fortunes of the State Normal School at Los Angeles. The conscientious and successful organizer and Principal of the school at Chico, the youngest of these schools in California, Edwin T. Pierce, was the gift of Union College and the State Normal School at Albany, New York; and when it is added that the present chief educational officer of the State, Superintendent James W. Anderson, was graduated from Jefferson College, Pennsylvania, and has risen by distinguished success in every grade of work from primary to high schools, as teacher, Principal, and Superintendent, it will be seen that our claim to a share in the best educational blood of the whole country is no idle boast.

EDITORIAL.

GEO. A. MERRILL, Principal of Cogswell Institute last year, is doing post graduate work at the State University this year. He is a candidate for the degree of Ph. D. in Meteorological Physics.

TEACHER'S INSTITUTES.—Lassen county, Bieber, September 26-29; Monterey, Pacific Grove, September 25; San Benito, Hollister, October 9-11; Contra Costa, Martinez, October 4-6; Santa Cruz, Santa Cruz, October 9-13; Glenn, Willows, October 16-18.

"SUPT. KENNEDY of Siskiyou writes: The Siskiyou County High School will open at Yreka on Monday, Sept. 4, 1893, with about thirty pupils. Mr. Frank H. Hyatt has been selected for Principal, and W. S. Hall for Vice-principal." Supt. Kennedy does not fail to give the JOURNAL local educational news.

WE commend to our readers the article on School Government in cities, giving the deliberate conclusions of Superintendent Draper, who when State Superintendent of New York had wide opportunity for the study of the subject and who is a recognized leader in administrative ability. School officers in cities will find it specially interesting.

THE article by Professor Barnes merits wide reading. It represents much labor, both in the collection of the material and in the wise and careful tabulation and analysis of the same. As its field of preparation was our State, it was a kindly and courteous act on the part of Professor Barnes to first give it to the public through the columns of the PACIFIC EDUCATIONAL JOURNAL. It was presented before the Educational Congress at Chicago and aroused considerable interest because of the original character of the investigation pursued as well as the interesting field from which the data was gathered. It will appear later in Eastern journals. May we not look for contributions in the same spirit from other readers of the JOURNAL?

THE Los Angeles city schools will open September 18th. By a wise provision the City Teachers' Institute will be held the week before. Professor Le Roy De Brown, formerly State School Commissioner of Ohio, is elected city Superintendent; James A. Foshay, of Monrovia, Deputy; E. C. Cates, of New York, Principal of the High School. The new Board made a number of changes. In the High School four heads of departments were created. A Mr. Johnson of Cleveland, Ohio, was elected head of the department of mathematics; W. H. Housh, of Salinas, science; Mrs. Frick, literature. The salaries of all the High School teachers were very materially raised. C. L. Ennis was re-elected principal of the Spring Street Grammar School, at an increased salary.

WILL the new High Schools in the State make any provision for Manual Training? It is just from such centres that innovations start—the field is open and custom does not hamper. Much will de-

pend upon the first principal. If he is a strong University man, the probability is, that everything will be subordinated to the University end. If a Grammar School teacher, whose training was academic or less, the so-called business or teachers' courses will be prominent. Where are the men to come from who will give room and attention to Manual Training? Must we wait for them until such institutions as Throop send out their graduates? Work can be well done in only a very limited number of courses in these High Schools—to divide is to weaken. We recommend this matter to our High School Boards and suggest that they thoroughly examine the courses of study pursued in polytechnic schools.

"I AM delighted with————. I never met a more progressive School Board. Their policy is one marked with rare insight into the needs of the schools, and I find great delight in working with them. There is no limit placed on materials for the schools. They can have everything they need. I look forward to a year of happy work with my teachers."

The above is a good specimen of the cheerful and optimistic specimens of letters received by the Editor, at the opening of a school year. Within two years, sometimes within a year, the district is rent by factions plotting against each other; the teachers *are* made anxious and fearful; the school suffers demoralization. What is the cause of it all? Is it because teachers are not practical? Is it because of false ideals entertained by the public? Is it because the average notion about the management of a school is, that it should follow the traditions of the fathers; that it should be attended by the least friction possible; that standards should be lowered in deference to the goddess of lubricity and that the schools should share in the general scheme of working the community for all it is worth politically?

THE Executive Committee of the State Teachers' Association met in San Francisco, at 10 A. M., August 19th. There were present of the committee, T. J. Kirk, President; J. P. Greeley, Secretary, and Geo. R. Kleeberger, Geo. Goodell, James S. Moulton, G. G. Grant, Geo. A. Merrill and Miss Maggie Schallenberger. In addition, the following responded to invitations and participated in the deliberations: President Kellogg, Earl Barnes, R. F. Pennell, C. H. Keyes, J. B. McChesney, James Barr, Herbert Miller, Josiah Keep, C. L. Ennis and P. M. Fisher. It was decided unanimously to limit papers read before

the Association to forty minutes. Mr. McChesney was authorized to communicate with Gustave Larsen and secure him, if possible, to present the merits of the Sloyd System before the Association. The following names were selected for the program of the General Sessions: State Superintendent Anderson, Presidents Kellogg and Jordan, John Swett, Professors Warner and Stringham, Judge F. H. Short and Miss Frances W. Lewis. In the Superintendent's Section two of the subjects selected for discussion are "New Departures in Superintendency" and "How May Teachers' Institutes be Improved." All indications point to an interesting session. Superintendent Barr, of Stockton, will appoint local committees at once for the proper reception and entertainment of the Association.

WITH this number we introduce to the readers of the JOURNAL the successor of Principal E. T. Pierce, at Chico. Robert F. Pennell was born in Freeport, Cumberland County, Maine. He was graduated from the Phillips Exeter Academy in 1867, and from Harvard University in 1871. He was immediately called to Phillips Exeter to take charge of the Latin department of that well-known institution of high rank. This position he held until 1883, when he was called to take charge of the Buffalo Latin School, Buffalo, New York. After six years' experience there, he came to the Pacific Coast. In 1889-90 he was acting Professor of Greek in the State University at Berkeley. 1890-92 he was Principal of the Marysville High School. In 1892-93 he held a similar position in Stockton. Not only has his experience been a long and honorable and busy one in the class-room, but he has found time to write two short histories, one of Greece, the other of Rome, both of which are used largely in New England.

He has also written a treatise on the Latin subjunctive, also largely used in the preparatory schools of the East. In addition he has edited a Latin book for beginners and written several vocabularies for Latin text-books. Mr. Pennell therefore assumes his new duties with the advantages of an extensive experience as a teacher and author and a high reputation as a scholar.

It remains for him to fit this experience and scholarship to Normal School work. The JOURNAL extends the hand of congratulation and wishes him abundant success.

WE had the pleasure recently of meeting Hamilton Wallace, Principal of the Grass Valley High School. He was enjoying a well-

earned vacation. We met him in his beautiful High School building at the last Teachers' Institute, in Nevada County, and learned from the patrons of the School how thoroughly he was devoting himself to its interests. The result is shown in the action of the School Committee of the Council of the State University. They have placed the Grass Valley High School on the accredited list in Group II and Group III, of the Requirements for Admission, excepting subjects 10, 13, and 14. Upon learning of this action the flag was hoisted over the school house and the local press congratulated the Principal, the Board of Education and the people of Grass Valley generally. Devotion and skill as an instructor, combined with ripe and sound scholarship, enabled Mr. Wallace to accomplish his object. He is to be congratulated by his profession, as is every Principal of a High School in the towns of the interior, who by wise administration, scholarship and unremitting struggle against difficulties inherent in the situation, places his school in touch with the University. It is no slight task and those who succeed deserve the cordial and unstinted congratulations of their fellows.

IN this same connection we are pleased to note several changes which can be accepted in no other light than promotion: Following the transference of Robt. L. Pennell from the Principalship of the Stockton High School, to the Principalship of the State Normal School at Chico, we find Herbert Miller of the Marysville High School elected to Stockton; G. S. Stokes of Nevada City, succeeds Mr. Miller, and G. F. Fletcher of Grass Valley succeeds Mr. Stokes. Two years ago Mr. Miller, who, in scholarly attainments has few, if any, superiors in public school work in the State, was a teacher in the Grass Valley High School. We extend to him our warmest congratulations upon his introduction to this larger field and wider horizon. Surely Nevada County is a good locality in which to abide awhile.

The State Text-books.

The *Sacramento Bee* says that the money stringency is very wide-reaching in its affects, for it is hurting the sales of the State's series of school books. A. J. Johnston, the Superintendent of State Printing, reports that the sales of books in July of last year reached $18,000, while they only amounted to a little over $12,000 this year.

The book dealers, it seems, intend to order only such books as they will absolutely need to carry on business. They will take no

chances by attempting to keep a stock of readers, spellers, arithmetics, etc., upon their shelves. It is probable they would keep the books if they could get them on time, but the law requires that cash or its equivalent shall accompany all orders for books.

Mr. Johnston says that the new geography will be ready for distribution on the first of September, and he is exceedingly glad that the great task is so near completion. The book has been in hand for six years or more. It will contain 149 pages and will be profusely and handsomely illustrated with maps and wood engravings. Charles H. Holmes, the official engraver, has made a large number of very fine pictures for the book.

Length of Coast Line of the United States.

A question having arisen as to the length of the coast line of the United States, the Coast and Geodetic Survey was recently called upon to furnish a statement of the length in statute miles of the general seacoast of the Atlantic, Gulf, Pacific and Alaskan waters; and also the coast line in statute miles of the same coasts, including islands, bays, rivers, etc., to the head of tide water. The reply was as follows: General seacoasts—Atlantic ocean; 2,043 miles; Gulf of Mexico, 1,852 miles; Pacific ocean, 1,810 miles, Alaska, 4,850 miles. Including islands, bays and rivers to the head of tide water, the statement was: Atlantic ocean, 36,516 miles; Gulf of Mexico, 19,143 miles; Pacific ocean, 8,900 miles; Alaska, 26,376 miles; a total of 90,935 miles.—*Ex.*

SCHOOL officers and parents do not always see the difference between a teacher who does honest work, looks after the character of the pupils, and disciplines so as to develop and strengthen good character, and the teacher who, on the other hand, promotes surface pupils in the name of policy, and smooths over all irregularities of conduct out of deference to popularity. The teacher's continual endeavor should be to make the most of the material placed under his care, and to cultivate the courage that will stand up for true convictions.—DR. PLUMMER, San Jacinto High school.



SEPTEMBER, 1893.

J. W. ANDERSON, - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - Deputy Superintendent of Public Instruction

The following decisions have been rendered since last reported:—

475. Section 1503 of the Political Code, as amended March 23rd, 1893, has reference only to the State Normal Schools of California.

476. No action of a Board of Trustees is legal, unless it is had at a regular meeting, or at a special meeting of which every member has had notice.

477. According to section 1830 of the Political Code, the calling of an election for the purpose of voting as to the levy of a special tax for school purposes, is a matter of expediency to be determined by the judgment of the Trustees of the district. There are no provisions of law by which the Trustees can be compelled to call such election.

478. If a Trustee neglects or refuses for the period of three months to attend to the duties of his office, his office becomes vacant, unless he is prevented by sickness, or is absent from the State by proper permission. See Section 996, subdivision 7, of the Political Code.

479. When the average attendance of a school for the entire time for which the school was maintained during the school year falls to *five* or *less* than *five*, it is the duty of the Superintendent to suspend the district, and to report the fact to the Board of Supervisors.

480. If the average attendance in any High School for the entire time for which the school has been maintained for the school year, after the first school year, falls to *ten* or *less* than ten, the Superintendent shall suspend the school in the High School district, and re-

port to the Board of Supervisors. Upon receiving this report the Supvisors shall declare the district lapsed. See subdivision 23rd of Section 1670 of the Political Code, as amended March 23rd, 1893.

481. Experience in private schools can be considered in estimating the experience required for life and educational diplomas.

482. The Attorney General, as well as the Superintendent of Public Instruction, has given it as his opinion that a High School Board has power under the law to submit to the electors of the High School district, whether bonds of such district shall be issued and sold for any of the purposes named in Section 1880 of the Political Code.

483. According to subdivision 7 of Section 1543, the County Superintendent has power to issue a temporary High School certificate to the holder of a High school certificate from another county in this State.

484. Teachers employed in High Schools must hold High School certificates.

485. High Schools cannot embrace primary or Grammar grades; nor can Primary or Grammar schools embrace High School grades. The Primary and Grammar schools, are under an entirely different *regime* from that of the Union High Schools.

486. There is no provision in the general school law which authorizes any Board of Trustees to raise money by taxation without a vote of the people. Sections 1 and 2 of the Act approved February 14th, 1891, evidently have reference to some special provisions in the charter of cities. The only plans for raising money by taxation are those relating to the district taxes and bonds.

487. A vacancy occurring in a Board of Education in a city of the fifth class must be filled by the members of the Board of Education, and not by the City Trustees of such city.

488. A city of the fifth class cannot have a city Superintendent of schools. The duties of Superintendent in such cities are to be performed by the Secretary of the Board of Education, who is a member of the Board. See Sections 797 and 804 of the Municipal Incorporation Act.

489. The Trustees, in employing teachers must fix their salaries. To employ a teacher, agreeing to give him for his services all the money that may be apportioned to the district during the year, does not fix his salary in such manner as the law implies.

490. The wife of a teacher cannot be employed to assist him in his school work, unless she is the holder of a valid certificate, even

though she agrees to teach gratis. No one must be permitted to teach any public school who is not the holder of a valid and legal certificate.

491. The issuing of a High School certificate upon a Normal School diploma is manifestly illegal. See Section 1775 of the Political Code, as amended March 23rd, 1893.

492. A new school district is not entitled to any apportionment of funds for the year in which it was formed.

493. The members of the County Board of Education are entitled to salary whenever, for any purpose connected with the schools, it becomes necessary for them to meet.

494. By the provisions of an Act approved March 30th, 1874, any officer who shall be guilty of a willful violation of any of the provisions of the statute under which he was elected, or of any other statute prescribing or defining his duties and powers, may be removed from office in the manner therein provided.

495. The Principal of a public school has no authority to grant diplomas of graduation to pupils completing the course of study therein until their right to graduate has been determined by the Board of Education; nor can the Principal promote pupils from one grade to another without the authority of the Board of Education.

496. A certificate granted under the statutes of 1891 for three years, must be renewed, or filed for renewal before the expiration of the three years. When renewed it may be renewed for the period of *six* years.

497. The election of a teacher, unless made at a regular meeting, or at a special meeting of which every member has had notice, is illegal and void. Subdivision 1 of Section 1617 of the Political Code is perfectly plain.

498. Under the law as amended March 23rd, 1893, nothing higher than a Grammar grade certificate can be granted upon a Normal School diploma of this State or of any State.

499. State certificates of other States cannot be recognized as credentials upon which to issue any kind of certificate in this State.

500. The Clerk of a Board of Trustees has no authority to employ a janitor for the school; that duty belongs to the Board of Trustees. If the Trustees fail or refuse to appoint, the Superintendent of schools must do so. See Sections 1607 and 1543, subdivision 12.

THE price of the Advanced Geography will be fixed by the State Board of Education at their meeting on the first day of September.

After that date all orders from dealers, or others entitled to order, will be promptly filled.

The State School Law will be sent out to superintendents at once. It will not be necessary for superintendents to send any orders therefor, as we have the data in this office which will enable us to determine how many to send to each superintendent. It may be well to say to superintendents that a sufficient number of copies will be sent to supply the Boards of Education, all of the Trustees, and all of the School Libraries. I desire the superintendents to say to the Trustees that the copies of the School Law are STATE PROPERTY, and that the copies should be carefully preserved; duplicate copies will not be sent.

I desire to impress upon superintendents the desirability of directing their attention to the enforcement of the Act on page 193 of the Statutes of 1893, relative to the tax on collateral inheritances, etc. A proper observance of the law will add very materially to the State School Fund. Superintendents can do much by calling the attention of the county officers to the importance of this list.

The new forms for diplomas have been prepared, and the diplomas are now ready. As soon after the meeting of the State Board on September 1st, as the names of the parties to whom diplomas have been, or may be, awarded can be inserted, they will be sent to the superintendents.

CALIFORNIA SCHOOL ITEMS.

THE Stockton schools opened August 28th.

MAYFIELD will build a $25,000 school-house.

THE San Bernardino High School building cost $75,000.

THE Cogswell School has closed for an indefinite period.

J. A. ORR has been elected Principal of the Turlock school.

SANTA CRUZ and Pacific Grove will open public kindergartens this year.

C. S. SMYTHE, of San Rafael, is the new Principal of the Hollister High School.

V. P. PRITCHARD has been elected Principal of the Franklin School, Stockton.

PROF. W. C. JONES, of the State University, has returned from his European tour.

HAIGHT school district, Stanislaus conuty, has let the contract for a new school building.

A. S. MILLER, of Wichita, Kansas, has been elected Principal of the Central School, Fresno.

A UNION High School District has been established in western Yolo by a vote of 105 to 30.

DR. W. IRVING HUNT has been elected Assistant Professor of Latin in the State University.

SLATE CREEK and Bella Vista Districts, Shasta county, will build new school-houses this term.

THE German residents of San Rafael have organized a school for instruction in the German language.

S. D. BROOKS, a graduate of the Michigan State Normal School, has been elected Principal of the Oakdale High School.

F. H. HYATT, of National City, has been elected Principal of the County High School in Yreka; W. S. Hall, of Oceanside, is Vice-principal.

W. K. GAYLORD, a recent graduate of the Boston Institute of Technology, has been appointed Professor of Chemistry in Throop Polytechnic Institute.

GUY H. STOKES has been elected Principal of the Marysville High School, to succeed Herbert S. Miller, who takes Principal Pennell's place in Stockton.

THE Los Angeles City Board of Education has appointed a committee to inspect the various systems of heating and ventilation in the large school buildings in the State.

THE special election held in Eureka school district to vote a tax of $5,000 for purposes not provided for in any of the funds, resulted in favor of taxation by a majority of 16 votes.

COUNTY SUPT. T. J. MCGRATH has changed his residence from St. Louis to Sierra City; County Supt. Katie L. Mullen, of La Porte,

Plumas county, has taken up her residence in Quincy, the county-seat.

IN Humboldt county a special school tax will be levied this year in the following named school districts: Arcata, Big Lagoon, Eureka, Fortuna, Ferndale, Grant, Port Kenyon, Patrick's Point, Rio Dell, Scotia, Trinidad, VanDuzen, Wild Cat and Worthington.

PROF. BARNARD, of the Lick Observatory, has brought with him from Europe the La Lande gold medal, awarded him for the discovery of the fifth moon of Jupiter. Prof. Barnard visited nearly all the principal observatories in Europe during his absence.

IN San Bernardino county every school district has, since 1883, voted to issue bonds. In some cases the bonds sold at par, in most instances above par. $289,900 of these bonds are still outstanding. As evidence of the continued prosperity it may be noted that bonds issued in '92 and '93 sold as well as any.

IN the distribution of the estate of Dr. J. B. Trembley, late of Oakland, the Chabot Observatory is to receive a valuable set of meteorological instruments, together with the records kept by Dr. Trembley for many years, and pamphlets and reports. The valuable library of the deceased doctor will go to the Alameda County Medical Association.

THE Lick Observatory building is open to visitors during office hours every day in the year. Visitors are permitted to look through the great telescope every Saturday night between the hours of 7 and 10, and at this time only. Whenever work at the Observatory will allow, other telescopes will also be put at the disposition of visitors on Saturdays between 7 and 10 P. M.

PROF. F. C. PERRINE has charge of the Electrical Engineering Department of Stanford University; Rufus Green has been elected assistant Professor of Mathematics; Dr. C. W. Little, from the University of Nebraska, takes Prof. Swain's place in the Mathematical Department. Prof. Swain has been elected President of Indiana University.

AT the semi-annual meeting of the San Francisco Teachers' Mutual Aid Society it was decided to put no limit upon the time during which sick benefits may be paid to any member, and no assessment was levied, nor were the dues or initiation fee raised. The treasurer reported that although the society had run behind during the last year still there is more than $10,000 in the treasury.

MISS PACKARD, the former Principal of the Los Angeles High school, has taken a trip to Europe for a year. Salaries of High School teachers in Los Angeles have been generally raised. Principal from $1,350 to $2,000; heads of departments, $1,200 to $1,800; assistants, $900 to $1,200. A. E. Baker, deputy under Superintendent Friesner, is placed at the head of the Classical Department; W. H. Housh, Department of Science; Mrs. M. J. Frick, Vice-principal, English Department.

VASSAR'S Greek professor, Miss Abbie Leach, has been offered a position at the Leland Stanford University. Miss Leach has been at Vassar since 1883, and is a highly accomplished and charming woman. She is a graduate of the Harvard Annex, and of Leipsic University. Besides this she studied for a long time under Professor Gildersleeve of Johns Hopkins University. This did not quite content the ambitious woman, so she went to Greece and spent a year there in hard study.

THE number of applications for admission of new students into the University of the Pacific has steadily increased and promises a large increase over the number in attendance last year. The increase is in both the academic and college departments, and the indications are that a large Freshman class will augment the number of college students. Dr. Isaac Crook, ex-President, has been elected Chancellor of the Wesleyan University of Lincoln, Neb. He leaves many friends in California.

BERKELEY and Stanford have both secured famous coaches for their football teams preparatory to the great match game to be played on Thanksgiving Day. Mr. Denman, the manager of the University of California team, went East to secure a trainer and engaged Mr. Heffelfinger, of Minneapolis, a "six feet four" giant. Stanford has probably engaged Mr. Bliss, the famous right half-back of the victorious Yale teams of '92 and '93. So there will be hard work on the campus and a great crowd on the stirring day.

STATE SUPERINTENDENT ANDERSON has sent the following circular to all the district attorneys, county auditors, county treasurers, and county clerks in the State: "Permit me to direct your attention to an Act entitled 'An Act to establish a tax on collateral inheritances, bequests, and devises, to provide for its collection, and to direct the disposition of the proceeds,' approved March 23, 1893." As the proper enforcement of this Act will add greatly to the State School

Fund, it is to be hoped that you will unite with the Superintendent of Public Instruction in all proper effort to see the provisions thereof fully carried out.

PROF. GEORGE P. CLAPP, of Yale, has been appointed to the chair of Greek in the State University. Assistant Professor Hunter, in Latin, is also from Yale, where he has been tutor for several years. Dr. Carl Pheln, assistant professor of political science, comes from Brown University. He took his degree at Gœttingen in 1889. Mr. Leach, the new fellow in political science and assistant in teaching the subject, is a U. C. graduate of last June. The new fellow in philosophy, Oliver B. Henshaw, is from Harvard. Mr. Lenher, instructor in elementary chemistry, is from the University of Pennsylvania. Mr. Curtis, instructor in viticulture, has been doing special work in that department for the past three years.

MARIN COUNTY SCHOOLS.—Marin county schools are all in session. Fifty teachers are employed in the thirty-six districts of the county. San Rafael, having become a city of the fifth class, recently reorganized its High School under the legislative acts of last session. The school is accredited to the State University. About forty students attend. Eleven teachers are employed in the school department of San Rafael, now under the direction of Mr. Francis Dunn, lately of the Mt. Tamalpais Military Academy. Principal Dunn is of the Class of '85, A. B., University of California. Mr. Fred. K. Hazzard, of the Los Angeles State Normal, has charge of the highest grammar grade and acts as Vice-principal. Miss L. M. McLean, University of California, assists Mr. Dunn in the High School. Mr. John A. Nowell, of the Leland Stanford Jr. University, has succeeded Mr. E. M. Cox as Principal of the Tomales schools. San Anselmo District and Sausalito District each voted a $5,000 bond tax to build new schoolhouses this year. The public school patrons are pleased with the new law which compels Boards of Supervisors to give a more liberal county support to the schools. The county Superintendent has earnestly advocated this for many years, as Marin's school rate has been below the average for counties of the State.

FOR ARITHMETICIANS.—An old woman carrying eggs to market was met by an unruly fellow, who broke them. When asked by a magistrate to prove her loss, she could only remember that in counting her eggs into the basket by twos, threes, fours, fives, or sixes, there always remained one over, but by counting them by sevens none were left. How many did she have?



MONUMENT TO PESTALOZZI

In the Market Place, Yverden.

THE

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CURRENT EDUCATIONAL THOUGHT.

THE statue of "Liberty Enlightening the World" must, if her light, like that of the vestal virgins, shall never die out, continually receive oil from your vessels. The sum of the importance of the work to be accomplished is the sums of the value of all human life.—Rev. A. M. RUSSELL to the teachers of Colusa county.

I VENTURE to prophesy that within half a century an untrained teacher will have as little chance of success as an untrained doctor or an untrained nurse. I maintain that all teachers, from the University professor to the teacher of the kindergarten, men as well as women, over and above a good general education ought to have a professional training for their difficult and important work. — ELIZABETH P. HUGHES, Cambridge, England.

ON the professional side the World's Fair Educational Congress has sounded the note of a victory over the downfall and routing of two fetishes long worshiped in our schools; the fetish of uniform work at a uniform pace for all children, and the deadly superstition that teaching is a matter of fixed method which can be drilled into insensate minds. It has become proverbial that we are educationally in a transition stage—to-morrow it will be found that we have made the transition.—A. TOLMAN SMITH.

To learn the "table of long or linear measure," the pupil, with "foot-rule, yard-stick, or tape-line," is put to measuring and reporting results, and I do not hesitate to say that this is the only sensible way to learn this or any other table to be used in measuring any subsequence whatever.—GREENWOOD'S *Principles of Education*.

As the family and society must be judiciously ordered to bring about the best results, co-education must not be left to hoe its own row. Every college faculty ought to have some woman in it to look after the interests of the female students to whom these can go for counsel.—MRS. A. A. F. JOHNSON, Oberlin College.

RESPECT the text-books you use. It is more demoralizing than you think to shake a child's respect for that which the authorities have provided. Some text-books are absolutely better than others. Some are better for you than others, but all are better than you could make, presumably. Respect them.—A. E. WINSHIP.

WHAT shall be done with the tell tale? It is not an easy thing to determine upon. There are times when it is the manly thing to report a wrong done, but there is nothing more demoralizing to mental and moral rectitude than a habit of tale-bearing. If the teacher can impress the distinction upon the children in such a way that they can see when it is honorable and when dishonorable to report, he will establish principles of action for life. In manhood, a man who witnesses a crime and attempts to screen the criminal by silence is guilty, and yet much of the teaching implies, at least the public sentiment of the school implies, that it is the height of honor to see a wrong done himself, his playmates, or the teacher, and refuse to report the same.—GEORGE P. BROWN, Editor of *Public School Journal*, Illinois.

THE Herbartians held one of the most inspiring meetings of the Educational Congress. They have gotten possession of an excellent idea, which is as yet concealed from the apprehension of many by its name, *apperception*. In common language, it means understanding, or seeing the relation or meaning of things, and is thus set over against *perception*, which is apt to leave its objects unrelated except in a merely mechanical way. Its purpose is to teach the young *to think*, which is something the schools have been failing to do in these later years. It is a misfortune that this movement insists upon masquerading under the name of Herbartianism. The less we have of Herbartianism as an *ism* the better, but we are in great need of *apperception*. Herbartianism, in so far as it emphasizes the importance of character building, is what this movement really means, and it does not carry along with it the dreary mechanism of the Herbartian system as it has been amplified in Germany.

GENERAL DEPARTMENT

Fundamental Education.

BY JOHN E. WRIGHT, NEWHALL, CAL.

In the examination conducted throughout this State by the *Examiner*, it was a noticeable fact that the pupils received the lowest average in the most important study—arithmetic. The *Examiner* placed part, at least, of the blame to the account of the State arithmetic. I think it is largely the fault of the teacher, and not of the arithmetic.

Too many teachers take from thirty to forty minutes in talking about such selections as "The Lady of the Lake," and other higher grade studies, while they devote only fifteen or twenty minutes to arithmetic, and few teachers give over ten minutes to a spelling exercise. For a graded school the State arithmetic is excellent; in an ungraded school it is not so good; for there the teacher has not much time to assist the pupil, and the explanations are too few for the pupil to do much without the aid of the teacher. A teacher who understands the subject and has the time cares little whether he has an arithmetic in the school or not; he will make the mathematician without the aid of a book.

Then, as to the question, Is our education of the present day of a practical form? Our courses of study show that we have lost sight somewhat of the fundamental branches, and that our Boards of Education are obliging pupils to study those things which in no way can concern them in earning their bread and butter. Such studies as astronomy, physiology, ancient history, and ancient literature should hardly be allowed to displace the more practical studies of arithmetic, reading, spelling and writing. We should teach children that their learning is to be put into practice when they reach the age of maturity.

It has for sometime been the complaint of newspapers and parents that a defect in our school education of the present day is that the school attempts to cover too much ground; that we attempt to give the child a smattering of studies in the higher grades and neglect to give a thorough knowledge of the fundamental branches. Our knowl-

edge of a thing does not always indicate education. We may have too much knowledge; our minds may be full of another's ideas, and still we may be unable to use a single idea in a practical form.

The value of education, then, is to enable its possessor to assimilate and work out the problems of life with which he comes in contact. The aim of all teachers should be to educate the child in the use of its own faculties. I have known pupils to be able to repeat whole pages of rules in grammar and formulas in arithmetic, and yet not be able to put to practice one of them. The common sense of some pupils has been completely crushed out by the cramming process that is carried on in some of our schools and colleges; the head is so full of borrowed ideas that the pupil has no room for individuality of his own.

The physical strength of a man depends largely upon his digestion, and his mental capacity largely depends upon his power to assimilate what he has read. To develop original thought should be the object of the teacher's aim. I have seen the teacher, and all too frequently, who would say, "Is that what the book says?" "Stick to your text!" thereby crushing out the main object of education. To develop habits of correct thought, to draw out the hidden power, and to lead the pupil to habits of accurate observation should be the aim. The successful pupil is the one who learns to think for himself; he will be the one who will make a success in life. It is he who leaves the old and beaten paths, and follows paths that are new, and through the strength of his own mind works out his observations.

There are at least ninety-eight or ninety-nine per cent. of us who are obliged to depend upon daily labor. Let us then see to it that our course of study shall give us strength and vigor to grapple with the difficulties that we may meet in our daily life. Our course of study should deal with the practical before we place higher branches there; and our pupils should have time to master those all-important studies before we place superficial branches there; many of them not at all useful in practical life, and not in any way likely to aid the individual in his personal grapple with it.

The Three R's.

Mr. Thomas Morgan, who is one of the leaders in the organization of laboring men in Chicago, and who is himself a day laborer in the railroad shops, said in one of the educational congresses held in

July, that reading, writing and arithmetic, as they are taught in the schools, when these alone are taught, tended to enslave more than to free the human mind. That the great need of the workingman is that he be trained *to think*. His idea seemed to be that the formal teaching of these subjects give to the learner certain forms and processes of more or less practical value in the mechanics of social life, but that the sum of the influence is toward the repressing of freedom of thinking. They think by a sort of rule of thumb and have no free use of their powers.

Has not this workman discovered what a good many who are supposed to do the thinking for society have failed to discover? We have been proclaiming that all persons in a free nation must know at least the three R's if they are to continue free. But there is coming to be a wide difference of opinion as to what is meant by a knowledge of the three R's. With some it evidently means the knowledge of certain forms and processes: To know *how* to add and subtract without knowing *when* to add or subtract. Some of our most trusted educational leaders have been advocating in recent years that what they call the logic in our arithmetics should be expunged, and the pupils made skillful in the processes. The better idea in the new educational movement is that the children be stimulated to *think* freely, and that the study of the *forms* of their thinking come later. The study of forms of thinking from the beginning does not give to a person confidence and freedom in his own thinking. He comes through a twelve years' course of training in our public schools, oftentimes, as timid and helpless as a child in the free and self-directive use of his mental powers. In the narrow and sharply defined paths in which he has been led he may feel at home, but set him to think his way through a new field and he is timid and helpless.

Thinking that is of any practical value in life must be directed to the discovery of the relations of *ideas* and *things* that constitute the social order. It is the *application* of arithmetic to life, more than the study of the laws of the process of arithmetical computation, that gives freedom and confidence in thinking. The most certain way of subjecting a person to the control of another is to train him to think by rule within narrow limits about things that have little or no relation to actual life. The school should see itself as located in the midst of a social order, and every subject of study in the school should be seen to be some phase of activity that constitutes this social order.

If the three R's are taught from this point of view, the teacher will seek to illuminate them with many other studies which the unregenerate are pleased to call fads; and vastly more than the three R's in the narrow and formal sense in which they have been taught, will be learned. Mr. Morgan's arraignment of the three R's, as chains to enslave the mind of him who knows merely these and nothing more, is worthy of the serious consideration of the thoughtful teacher.—*Ill. Public School Journal.*

The Limits of Free Education.

San Francisco is not the only place which is suffering from inadequate school accommodations. In several Eastern cities, notably New York, there are vigorous complaints of overcrowding, by which thousands of children are forced into the streets. The natural discontent at this deplorable state of things is not, however, always exhibited in the wisest way. One of our New York contemporaries, for instance, can find nothing better to say than this:

"What is the lesson of all this? It is that every cent appropriated for the schools should be spent in providing the elementary instruction for which the demand is universal. Every foot of school room in the city should be given up to it, and no more money should be expended in higher education for the benefit of the few at the cost of the deprivation of the multitude. In other words, the expenditures of the school fund should be governed by democratic and not aristocratic principles."

This idea is dressed in democratic words, but it is of the very essence of bigoted Toryism. An intolerant aristocrat would express it in this form:

"Every cent appropriated for the schools should be spent in providing the elementary instruction which is all the masses are fit to receive. Every foot of school room in the city should be given up to it, and no more money should be expended in higher education at the cost of property-owners for the elevation of the multitude above its station. Those classes that can afford to pay for advanced instruction should have it, and those that cannot should go without. In other words the expenditures of the school fund should be governed by aristocratic and not democratic principles."

The true democratic principle is that of giving every child a fair start in life and fair opportunities for advancement. Under the system of free education which we are striving to perfect that can be done.

The son of a laborer can enter the public school by the side of the son of a millionaire. If he have a natural bent for learning he can make his way through the primary school, the grammar school, the high school and the State University. And even then his intellectual development need not stop. There is no limit to education. The free library, the free museum and the free art gallery are the logical sequels of the University. By their aid self-culture may be carried on to the end of life.

The falsely called democratic, but really oligarchic, ideal of our New York contemporary would make the higher education, with all the gates to power and prosperity of which it is the key, the exclusive possession of a property-holding caste. It would let the masses learn nothing more than to read, write and cipher, and so would deprive them forever of that power of effective combination which belongs to trained intelligence. True democracy has different aspirations. It believes no education too good for the masses, and it looks forward to the time when the law-making power will be exercised, with wise self-interest, by the enlightened reason of the whole people, instead of by the picked misrepresentatives who now abuse it. Ideal democracy demands the referendum, and the referendum demands a thoroughly educated people.

If there are not school accommodations enough to provide for all the children who need to be taught, the remedy is simple. Provide more schools.—*S. F. Examiner.*

A Word Fitly Spoken.

When one thinks of the hundreds of thousands of foreign immigrants who seek this land of liberty through the gates of our harbor and never see more of it than is contained within the border of the Empire State, he might be justified in fearing that the influx of so varied and sometimes so undesirable a population would seriously contaminate our society and imperil good government. But the danger is averted by influences which prevail in the opposite direction.

The ignorant immigrant, or the immigrant with perverted notions of government, rubs up in his daily occupation against intelligent and common-sense American workmen, imbued with the spirit of our institutions, and the effect of the contact is to gradually transform the newcomer into a good citizen. But more powerful still is the influence of our common schools upon the children of foreign birth. The

inspiration of a free country, where all men have equal rights and privileges, and the enthusiasm for American ideas instilled into youthful minds by the teachers in our public schools, permit no seeds of socialism or anarchy to find root here.

It is the glory of our State and its educational system that amid such adverse conditions good order and government are so universal and so continuous. Let our common school system breathe forth sturdy American ideas, inspiring all youth to give their best energies for promoting the highest civilization and encouraging the highest type of citizenship.—GOVERNOR FLOWER, before the New York teachers.

The Caravels and the Viking Ship.

Imitations of the ships which the discoverers of America used are now on exhibition at the Columbian Exposition. On looking at them the first thought one has is, that few at the present day would think of crossing the ocean in such puny vessels.

The *Santa Maria*, which is made as nearly as possible after the model of the flagship of Columbus, is 71 feet 3 inches long on the water line and 233 metric tons displacement. The rigging and masts are extremely heavy and the general appearance of the boat is clumsy until the great square sails are set. Then she looks like a vessel from fairyland, so airily and gracefully is she set in the water. She is built very high, fore and aft, there being altogether four decks. The *Nina* is rigged with leg-of-mutton sails and is hardly more than a row boat; while the *Pinta* resembles the *Santa Maria* in model and is less in dimensions. In crossing the ocean in March of this year the *Santa Maria* encountered a severe storm and came near being wrecked with all on board.

As some doubts had been expressed of Leif Erickson, the one who is credited with the discovery of the coast of Massachusetts about 500 years before the discovery of America by Columbus, crossing th ocean in his frail craft, the hardy Norsemen showed themselves worth of their daring ancestors by building such a ship and sailing in from Norway to the World's Fair. She is an exact copy of the Vik ing type of ship, is 71 feet long by 16 wide, and only draws four fe of water. The ship has one clumsy-looking mast and shields alon the sides to protect the oarsmen.—*School Journal.*

The Wonders of Our Language.

The construction of the American language must appear most formidable to a foreigner. One of them, looking at a picture of a number of vessels said, "See that flock of ships." He was told that a "flock" of ships was called a "fleet," and that a "fleet" of sheep was called a "flock."

And we will add, for his guidance in mastering the intricacies of our language, "a flock of girls" is called a "bevy," that a bevy of wolves is called a "pack," and a pack of thieves is called a "gang," and a gang of angels is called a "host," and a host of porpoises is called a "shoal," and a shoal of buffaloes is called a "herd," and a herd of children is called a "troop," and a troop of partridges is called a "covey," and a covey of beauties is called a "galaxy," and a galaxy of ruffians is called a "horde," and a horde of rubbish is called a "heap," and a heap of oxen is called a "drove," and a drove of blackguards is called a "mob," and a mob of whales is called a "school," and a school of worshipers is called a "congregation," and a congregation of engineers is called a "corps," and a corps of robbers is called a "band," and a band of locusts is called a "swarm," and a swarm of people is called a "crowd," and a crowd of puppies is called a "litter," and a litter of chickens is called a "brood," and a brood of fish is called a "school," and a school of biscuits is called a "batch."—*Florida School Journal.*

There are enrolled in the public schools of the United States 12,699,196 pupils. The average daily attendance is 8,004,275. The following list will show the attendant expense. New York, $17,543,880; Pennsylvania, $12,922,422; Illinois, $11,645,126; Ohio, $10,602,238; Massachusetts, $8,286,062; Iowa, $6,382,953; Missouri, $5,432,262; Michigan, $5,349,366; Indiana, $5,245,218; California, $5,187,162; Kansas, $4,972,067; Minnesota, $4,183,310; Wisconsin, $3,801,212; Nebraska, $3,376,332; New Jersey, $3,323,067; Texas, $3,278,200; Kentucky, $2,260,468; Rhode Island, $1,157,014; Maryland, $1,910,663; Colorado, $1,681,379; Virginia, $1,606,509; Tennessee, $1,526,241; Maine, $1,327,553; South Dakota, $1,119,630; West Virginia, $1,198,493; Arkansas, $1,016,776; Mississippi, $1,107,970.

METHODS AND AIDS.

How to Make Geography Interesting.

ANNA MC LANAHAN, SACRAMENTO.

PRIMARY GEOGRAPHY.

This subject was formerly taught from the text-book entirely, and I find that there is still a decided tendency in that direction. This is especially true of crowded, ungraded schools. The teacher often frankly admits that this is not the right method; but says there is not time to prepare the children before they take up the work in the book, nor time for supplementary work after the text-book has been commenced. This is a mistake!

Much preparatory work can be done at recess or noon, and the little ones will enjoy it far more than any game. Make an excursion with them into the school-yard or into the road after a rain. If it is in the summer time throw a few pails of water upon the ground and it will answer the same purpose. Now give the children a lesson on the different forms of land and water. Of course, do not attempt to teach them all at once. Many such excursions will prove profitable. If there is a river, a brook, or a lake in your vicinity visit it, and give a lesson that the smallest child in your school will remember always. California is a fine place to study mountains; for though in many places it would be impossible to make an excursion to them at recess, there is no place where we cannot see them. And in some places we can see the snow upon them, while down in the valley we are uncomfortably warm. When this is the case, give a simple lesson upon "The Effect of Elevation upon Climate." Our school manuals prescribe that pupils should begin the study of local geography in the third or fourth year, but if you make the lessons simple and interesting there are many things that can be taught in the first year. In geography, as in every other study, it is well to teach the child as early as possible to observe intelligently.

Excellent books to assist in this preparatory work, are: *King's*

First Geographical Reader, *Seven Little Sisters* and *Each and All*. In the second, third, and fourth grades they make excellent readers; and interesting language lessons may be taken from them occasionally, even for the first year.

GEOGRAPHY AFTER THE FOURTH YEAR.

Our *State Primary Geography* is an excellent book. It does not begin with definitions, and it almost *makes* the teacher do some *concrete* teaching.

In studying our own and the other countries of North America, the second, third, and fourth numbers of *King's Geographical Readers* are very useful, and it is well to use them for the reading work, instead of the stupid *Second Reader*. *Stories of Persons and Places in America*, by Helen A. Smith; *Zig-Zag Journeys in the Occident* and *Zig-Zag Journeys in Acadia* will prove interesting home reading, aside from the books referred to in the State Geography.

While studying South America the books mentioned in the State Geography should be read; and a chapter from *The United States and Foreign Powers* (one of the Chautauqua books) about the history of the South American Republics, will be well worth reading aloud to your class.

Europe is always interesting, especially when an outline of the history of each country is given. The books referred to in our State text-book for supplementary work are good; but if you haven't them, or want something additional, you will be apt to find what you want in *Persons and Places in Europe*, by E. L. Benedict; Johonnot's *Stories of Other Lands*, *Innocents Abroad*, *Last Days of Pompeii*, *Zig-Zag Journeys in Northern Lands*, *Zig-Zag Journeys in Classic Lands*, *Zig-Zag Journeys in the Orient*, or *The United States and Foreign Powers*.

Before leaving Asia, a brief account of the history of the more important countries should be given. Extracts may be selected from *Zig-Zag Journeys in India*, *Our Boys in China*, *Zig-Zag Journeys in the Levant*, and *Ten Great Events in History*, that will help to give an idea of the history and the manners and customs of the people, as well as of the interesting physical features of the countries.

We should not leave Africa without a brief account of the history of Egypt and the Barbary States, and of the progress of discovery and civilization in central and southern Africa. Extracts from Drummond's *Tropical Africa*, *Zig-Zag Journeys in the Levant*, and *Innocents Abroad* may help in this work.

A few lessons upon the formation of the islands, and a few upon the people of the different groups, cannot fail to make Oceanica interesting. Now would be a good time to teach your classes something about the Sandwich Islands, even if it would be out of the regular line of the work. The pupils hear the question of their annexation discussed almost every day, and consequently a lesson about them would make a deep impression. The chapter upon "Hawaii" in *The United States and Foreign Powers* will be found helpful, as it gives something of the history of the people of these islands. Not long ago there was an excellent article in the *Sacramento Union* upon the formation of volcanic islands. A scrap-book made up of such articles often proves very useful, especially in districts where the library books have not been chosen with a view to helping in the school work. The *Youth's Companion* publishes many interesting geographical articles. Call the children's attention to these, so that they can read them at home if you do not wish to use them in school.

It is not well to leave any continent without making a sand map of it, and it is often a good idea to model a separate map of some of the countries. This fixes in the mind the shape of the country, the position of the mountains and the slopes, the size and position of the valleys, and the comparative length of the rivers, as nothing else could. It is often well to have maps sketched, rapidly with pencil or crayon from memory, but do not waste the time of your class making elaborate maps. There is a certain city where geography is sacrificed for map drawing, and all the other studies in their course are made secondary to it. They decorate their class-rooms with framed maps; they ornament their halls with them. They are pretty, and do very well for decorations; but think of the wasted hours!—hours that might have been spent upon practical work.

Study on Children's Plays.

FOR TEACHERS' MEETING, OAKLAND, CAL., SATURDAY MORNING, SEPTEMBER 16, 1893.

By play is meant all the pleasurable, self-imposed activities of the child, spontaneous or acquired, from balancing on one foot to base ball.

STUDY ON A YOUNG CHILD.

Give the name and age of the child.

1. Note in detail the most common plays of the child at present.

2. Note new plays as they are added from time to time.

3. What seems to have suggested each play, or its special features? Was the child shown or told how to play it? Could you see how the play was suggested by occupations going on about the child, or by other environment?

4. How long does the child play one play continuously? How long before he lays it aside for good?

5. At what time in the day is the child most playful?

6. Does the child repeat his plays exactly or with variations?

7. Has the child playfellows? pets? Of what playthings is he especially fond?

8. It would be of great interest if one could trace in outline the growth of some complex play, for instance, playing with dolls, noting the first interest in the subject, and the gradual adding of details, such as doll-dressmaking, doll-housekeeping, etc. Playing school or keeping store would be equally good.

9. The record of a child's life for a whole day, showing the kind, succession, and duration of its free activities would also be of great value. Single hours would also be valuable.

STUDY ON SCHOOL CHILDREN.

Many of the suggestions under the last heading will apply here. In addition one may note: Seasons of the year when certain plays are in favor; evidences of self-glorification and selfishness; evidences of helpfulness and generosity; rhythmical movements and songs; what is fair and not fair; what authorities are invoked in disputes; how disputes are settled; what plays boys and girls play together; what plays are especially attractive to boys, to girls; what kind of children lead in plays; mental characteristics of children who do not care for play; change in range of play activities at the period of puberty; the incentives that urge a child to excel in play; good qualities developed in plays; effect of introducing an adult into a play; how work becomes play; appearance of the dramatic instinct in plays; dangerous plays; immoral plays; etc.

EDUCATIONAL QUESTIONS.

To be of any value, answers to these questions should be based on data collected by observation.

1. Into what groups can you classify your pupils according to their plays?

2. Should boys and girls ever be allowed to play together at school?

3. How far should training in good manners be allowed to interfere with freedom in the play-ground?

4. Is it best for the teacher to play freely with the children in the play-ground?

5. At what point should the teacher interfere in school ground disputes.

6. Should recess be given? If so, what should be the character of the recess?

7. How can natural qualities shown in the play-ground, such as leadership or inventiveness, be made use of in the school room?

Some of the best studies on the subject of children's plays are: W. W. Newell's "Games and Songs of American Children," Harper Bros., 1883; John Johnson's "Rudimentary Society Among Boys," *Overland Monthly*, October, 1883, and later expanded in John Hopkins' "University Studies" in Historical and Political Science, Vol. 2; G. Stanley Hall's "Story of a Sand Pile," in *Scribner's Magazine*, June, 1888; Jean Paul Richter's "Levana," chapter 3, and the writings of Froebel.

The papers are to be handed in on Friday, September 15th, and they will be discussed the following morning.

Submitted by Earl Barnes, Professor of Education of the Leland Stanford Jr. University, at request of J. W. McClymonds, City Superintendent.

A "Friday Afternoon" Talk.

BY MONA FARGHER PURDY.

The school-ma'am stood upon the platform with one hand full of marbles. As she rattled them softly between her palms, the owners looked up wistfully. "Yes, boys," she said; "I shall give them back *this* time, but *next* week———" With a warning shake of her head and eyes that tried hard to look stern, she turned to the desk and glanced hastily down a page in her note-book.

"To what kingdom do these belong, A class?" rattling the marbles again. "To the mineral kingdom," answered Jim Bircham.

"And where do they come from?" "By Wilkie's—to the corner grocery," said round-faced Henry Keebler.

An arm waved wildly from a front seat. "Teacher, teacher!" cried Eddie Bolan eagerly, dropping a book with a bang as he half arose in his place. "You can get 'em cheaper to Sieb's! Allies and chinas!"

"But where does Mr. Sieb get them?" Miss Marsh held up a finger to silence the laugh ready to come from the back seats.

No one could tell, and Will Coe was asked to point out Oberstein on the Nahe on the large map of Germany upon the wall behind him.

"All of you look where he points. Here, then, at Oberstein, Germany, marbles are made and most of them are sent to American merchants, who sell them cheap to the little American boys who boast as large and varied a collection as their pocket-book allows."

"At the immense agate quarries near Oberstein the miners are very economical; they make the broken odds and ends of the larger stones into the small hard balls our school boys delight to knock about with their knuckles."

"Two or three hundred of these little angular blocks are thrown into a flat stationary tablet of stone cut into irregular furrows. Here they are kept in motion by a block of hard wood revolving over them while a constant stream of water flows through this small mill. In fifteen minutes they are ground into regular spheres and roll out as brand-new marbles. One manufactory with three mills turn out 60,000 marbles in a week."

"These brown ones," selecting several, "are made of clay and baked." "Besides the agates there are china and glass marbles," put in Earl.

"Try and find out something more about marbles," concluded Miss Marsh; "and, in order to remember what I've told you, tell some one the minute you get home."—*The School Journal.*

Subject of the Infinitive.

G. S. METCALF, CARPINTERIA, CAL.

I am well aware that some few of our so-called grammarians deny that the infinitive has a subject in the objective case; but their opinion is not the result of careful investigation and research, but rather the want of them. This construction occurs in English quite as fre-

quently as does the subject nominative, and in all complete and scientific text books on grammar, it is given a position equal in importance to the subject nominative.

By the etymology of our language, a finite verb takes a subject in the nominative case, and for the same reason an infinitive takes a subject in the *objective* case. In very many of our best grammars we find the following, or a similar rule: "*The subject of an infinitive is in the objective case, when it is not also the subject of the finite verb.*" Example: I wish [*him* to be a teacher.]

That "him" is not the object of "wish," as is generally taught in our schools, and even upheld by our State Grammar, may plainly be seen by expanding the sentence, thus: I wish [that he would be a teacher.]

Now, would any one dare claim that "he" is the object of "wish?" Certainly not. Yet such a claim would not be one whit more absurd than to assert that "him" is the object of "wish" in the abridged form. Both are subjects of their respective verbs; "he" subject of "would be" in the expanded form retains the same relation in the abridged form; being changed in form to "him" according to the etymology of language. The entire subordinate sentence is the object complement of "wish."

On page 88 of our State grammar, the author has this sentence: We believed [it to be her.] He states that "it" is the object. Expand the sentence, We believed [it was she.] Is "it" the object of believed" or the subject of "was?" It is certainly the latter. Then how can "it" be the *object* in the abridged form? Teachers who wish authority on this point will find plenty by consulting the following text-books: Greene's Grammar, page 188; Quackenbos', page 143; Holbrook's, page 117; Harvey's, page 182; Stoddard's Latin Grammar, page 280; Rigdon's, page 55; Whiting's Essentials, page 218. It is to be hoped that when our State Grammar is placed under revision, this very important point will be given a place within its covers.

A Criticism.

DEAR EDITOR: In your August number I find an article on "Helping Pupils." Will you please give, in your journal, a solution to the second problem?

If the pupil need help in the first problem he will have a hard

time "studying out" the second. The problem is unfit for the pupil because it admits of more than one answer, and does not admit of a good solution for a pupil of that grade. We must consider that the "Third Reader pupil" of Indiana is in a lower grade than our Third Reader pupil of the three-book series.

Suppose the boy is paid at the close of each month, he cannot buy the safety until the end of the fourth month. But if he is paid at the end of the week, as is usually the case, he will have the money a week sooner, and if the solution is given in days, he can buy the safety at still an earlier period. If the pupil gave the answer "four months" I would think he had profited little by the solution of the first problem, and the other answers require work beyond his years.

The plan is good, but our problems, like our chemical experiments, should be tested at home before being presented to our pupils.

Yours respectfully, HARRY C. SHAW,
Warner, San Diego Co., Cal.

Answer to Mr. Drake's Problem.

A subscriber who is a mechanic sends the following:

ESCONDIDO, CAL., 18th Sept., 1893.

Editor Pacific Educational Journal:

SIR: I see in the September JOURNAL, page 352, Mr. Drake's problem, which I understand to be strictly a question of per cent. and nothing else. We will use a hundred-dollar bond. Investment $110. Per cent., the question, 100 parts; $90 the amount received over and above the face of the bond; then

$$110 : 100 :: 90 : (81\ 9/11).$$

We find 81 9/11 per cent. the answer to his question. Had the question been put thus: What per cent. would I make per annum? we would divide the 81 9/11 per cent. by 15, the number of years running, and we have 5 5/11 per cent. We find this proves, because 5 5/11 per cent. interest on $110 for one year is six dollars.

Yours, JAS. M. DONNELL.

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

An Intelligent Visitor—A Hint for Teachers' Institutes.

Most of the prominent European nations sent delegates to the Chicago Exposition to represent their departments of education. During the month of August representatives of Germany, France, Russia and Austria have visited this coast, and have examined, as far as they were able at this season of the year, the educational institutions of California. One of these gentlemen, Monsieur Martin, in describing his own work mentioned one feature which might be modified and adapted to the needs of our California Institutes.

Monsieur Martin is inspector of schools in one of the mountain departments of France—a position almost exactly like that of County Superintendent in California, except that he is appointed by the central government—after passing most rigid examinations. He holds two yearly conferences with the teachers in each of the seven cantons in his department. Some weeks in advance he sends out directions to the teachers of the canton, telling them that a meeting will be held on a certain day, and directing them to send him, two weeks before the appointed day, an essay on teaching arithmetic, or on some other appointed topic, and to come prepared to give a lesson on some assigned subject. On the appointed day the inspector takes up the essays which he received two weeks before, and which he has been over with care, and criticises them, adding such suggestions as he is able, and then returns the essays, marked and corrected, to their writers. Then they decide by lot who shall give the lesson, which all have come prepared to give, and some one takes the class of children and presents the subject. After the children are dismissed, the work is criticised and discussed. Then they all go and have dinner together at the public inn, each paying for his own meal. These conferences come twice a year, and they do much to stimulate intelligent effort and study among the country teachers. In one way these conferences are superior to our institutes, for the teachers all do some definite work in

preparation, and each has his work personally criticised. At the same time the meeting is a social reunion, and gives opportunity for acquaintance and common exchange of thought. Is not Monsieur Martin's plan suggestive of possible improvements in our work?

The Differentiation of the High School, the Coming Movement in Education.

Two articles in the February number of the *School Review* treat, 1st, of the High School and its enemies. 2nd, of the Curriculum for Secondary Education, now under consideration by the National Council of Education. Permit me to say that I do not think the problem has yet been grasped in its entirety and that it cannot be satisfactorily settled until all the factors are considered. The opposition to the High School has lain in the facts that but a small proportion—five per cent. of the school population are there educated, and that its curriculum has been too much subordinated to college and University requirements. The last error is now perceived, yet not sufficiently perceived. When this is remedied, the first objection will also vanish. But this can only be done by treatment of the broadest and most thorough kind.

The educational methods of our country have been and are still for the most part scholastic, an education from books, an imparting of information about things. There has been scarcely any instruction —in the schools—in creation, in taking the raw material of nature and changing it into useful and beautiful forms, in doing that which the vast majority of people have to do for their life-work, and because imperfectly trained, do very imperfectly. A vast amount of creative work has been done outside of the schools, witness our roads, buildings, manufactures, I will not say our art, there is as yet so little to boast of—for the manifold defects of all which we are largely indebted to the lack of training, of creative instruction, in the schools.

The workers of the United States number about 22,000,000. Of these nearly half are agriculturists, 25 per cent. artisans, 20 per cent. in commerce, 5 per cent. professional. Of the school population of 8,000,000, 1 per cent. nearly, is in institutions of higher education, 5 per cent. in high schools and secondary institutions, 94 per cent. in the primary and grammar schools. Compare the two percentages. Twenty-five State Universities have been founded and all sustained at

large expense to educate the very much less than one per cent. of the school population who will pass into the professional class. No lover of knowledge will regret the State Universities or one dollar of the expense, though there may be a cry of class legislation. And every lover of knowledge will rejoice over the thousand or so of high schools with their 400,000 pupils. But every thoughtful educator must ask, how well are we educating the 94 per cent. of children who do not go beyond the grammar school, many of whom indeed do not finish its course? Why do not more go on to the high school? Is the high school not fitting them in the best manner for their work in life?

There is one answer to these questions. It is the struggle for existence that keeps children out of the high school, and that takes them out of the grammar school. It is because they are not there taught what they must do in life, because they are too much instructed in scholastic and not enough in creative knowledge, that their parents think they can not afford to give them more "schooling," and therefore take them away and put them to bread-winning.

It is a truism to say that the education of a country should be adapted to its needs, but in truth our education is not adapted to our present needs. We are giving a special education to the smaller class in the community—the professional—and making no provision for 94 per cent. of the workers. Agriculture, manufactures and commerce are the three material elements of national prosperity. That these three may attain high perfection is the constant effort of modern states. That this effort may be successful, it must be seconded, in fact the initiative must be taken, by the school.

I am convinced that the coming movement in education is that the school shall largely assist in training the child for its future special work in life. As the workers of the nation are agriculturists, artisans and commercial, the differentiation will naturally begin in the high school, by the addition of a commercial and an art-industrial course. These two courses will meet the needs of the commercial and artisan classes, and the latter will also assist the agriculturist, if another is not specially organized for him. The commercial course will give the special training of the so-called business colleges, book-keeping, commercial arithmetic, geography and law, with type-writing and stenography. With these should be carried on the present courses in English, science and a modern language. The time given should be two, and when practicable, three years. The art-industrial course will have special training in drawing and working in metal, wood, leather, clay

and other material. Like the commercial, it will dove-tail in with a selection from the present high school studies. The present University course should be continued, not only for those who intend to take the higher education, but as a liberal education for those who do not —for the most part young women.

The people at large have been for some time feeling the need of this special education, tentative efforts have been made in various places, but without any well-digested scheme. Two hundred thousand pupils are being instructed more or less in various parts of the country in manual training industries. The most of this work is done in grammar schools, and of course imperfectly, but the movement is in the right direction. The only commercial high school of which I know is that of San Francisco. It has day and evening sessions, some 800 pupils, is well conducted and highly valued. Commercial departments also are a part of the high school in Pittsburg, Detroit, Waltham, probably elsewhere. In California such departments will be organized this year at Stockton and Los Angeles. For three years San Francisco also carried on at public expense the Coggswell Polytechnic School. This has now reverted to its trustees, and art-industrial features are now being tacked on to the commercial high school. No doubt it will shortly differentiate into an art-industrial school.

Of the two differentiations, at the present stage of our national progress, I consider the art-industrial the more important. Skilled artisans are at present a great need of our country. Because we did not train them, we imported them so largely that foreign artisans control our labor unions and exclude American boys. Or rather, the lack of training on the part of American boys excludes them from the art industries. France is not so neglectful. She is the most skillful and artistic manipulator in the world of the raw materials, cotton, wool, silk, metal, etc., and she is so, largely because out of one hundred and seventy schools in Paris one hundred have workshops connected with them. Mr. Mundella, then minister of education in Gladstone's cabinet, told me, several years ago, that the South Kensington Museum was founded, as a commercial enterprise, to instruct the British artisan and enable him to compete with his continental rivals, and, he added, "it is worth millions of pounds a year to England."

That art industrial training is felt to be a great educational need is shown by some recent benefactions, notably that of Mr. Drexel in Philadelphia, and Mr. Armour in Chicago. The higher education is now pretty well provided for. It is the secondary that needs the

stream of gifts. But the work is so vast that public aid must supplement private benefaction. The "plant" needed for a commercial course is not very expensive, chiefly type-writing machines, and few cities need be deterred by it. But the "plant" for an art-industrial department is quite another matter—forges, lathes, tools and an abundance of materials to work with. When the need is once clearly seen, however, clear-headed communities will not be deterred by it.

Naturally art-industrial departments will first be engrafted on high schools established in manufacturing centers and the larger cities. As their advantages are felt, the movement will extend to the smaller towns.

The three great departments of knowledge are literature, science, and art. For the first only provision was made in our early educational history. During the last thirty years large room has been made for the second. It is now time to crown the work by the harmonizing presence of the third and most beautiful of the sisters. Our roads have been made, our towns and cities built. No doubt they need to be remade and rebuilt. That is a part of the process of the ages. But the era of clearing a place for ourselves and the era of strengthening ourselves among the nations have passed. Now has come the era of advancement. These three eras are like the three elements of style, clearness, strength, beauty, and have a like natural relation. If our manufactures, the things we make, are to be beautiful, our children must be taught the principles and practices of art. There are plenty of signs abroad that the demand for the trained, skilled hand is increasing. That we are yet far inferior in skill to other nations is evident by the thousands of millions we pay them annually. The tariff charges alone last year were upwards of $450,000,000.

It may be objected that this movement will be a mere organizing of trade-schools. Better trade-schools than no schools at all. Nine-tenths of the youth of the country leave school at fourteen, many even earlier. Art-industrial and commercial schools would hold a large proportion two or three years longer, for then they would be prepared and well prepared for their work in life. Parents would not grudge the time nor boys work unwillingly. Few boys are mentally fitted to be scholars or to take a University course. The majority are well-constituted mentally to be good artisans, men of business, agriculturists. They will be much better workmen for good preparation. Moreover, as already indicated, some of the usual high school studies will be united with the special training. The "generals" will not be neglected

while the "specials" are enforced. The citizen will be more intelligent and the artisan more skilled. Young lives will not be stunted and dwarfed by being driven to work at too tender an age. Ideals will have time to develop under good teaching at an age when ideals are formed, the standard of intelligence will be raised, the solving of many social problems assisted, more efficient men and women be trained for the work of the commonwealth.

HERBERT MILLER, Stockton Cal., in *School Review.*

School Board Notes.

The school board at Pocatello, Idaho, has decided that no married woman and unmarried man shall be employed as teachers.

The Columbus, O., board of education resolved that hereafter all applicants for teachers in the public schools must, before they can become eligible, give satisfactory evidence that they have received a common school education in the public schools in the United States.

The Boston school committee ordered that in all official records and documents containing the names of teachers and pupils in the public schools, no abbreviations or diminutives shall be used, but such names shall be expressed in full, or by stating at least one of the given names in full.

Philadelphia school teachers are not allowed to impose corporal punishment on wicked pupils. Recently a father of a boy who was a terror to his teacher, a pretty but helpless girl, appreciated his son's impudence, followed him to school, caught him in the act of disobedience and thrashed him before the class.

At the last meeting of the Oakland, Cal., board of education, Chas. G. Reed entered a protest against Director Chestnut's smoking in the board rooms. The Directors got into an undignified wrangle, and then Director Clement stopped the small talk by suggesting: "Gentlemen, this is not the English parliament."

The Joliet, Ill., school board adopted the following: The board recognizes that orthography, reading, penmanship, arithmetic, grammar, geography and history of the United States are the essential studies of the common school course and desire that pupils in the grade schools shall be thoroughly taught in these branches, and the

superintendent is hereby directed to authorize each teacher to discontinue all other studies when the pupils under their charge need the time for extra study and teaching in any of the above branches. It is the duty of each teacher to endeavor to have all pupils thoroughly master all of the above studies, of the grade taught, within the time limited by the course of study prescribed for each grade.

THE true test of good teaching is the degree and kind of effort put forth by the pupils. An intelligent member of a class in physics recently passed a severe criticism on her young teacher because he performed all the experiments and made all the explanations himself, requiring very little of his pupils. The same student contrasted unfavorably her teacher in physics with her more experienced teacher in another subject whose practice it was to do little himself but suggest, direct, and stimulate, and to require much of his pupils. This student discriminated wisely. Good teaching does not consist in much talking and explaining, but in stimulating and inciting the pupil to self-activity. Teachers are often under strong temptation to make school work as easy for the pupils as possible. This is what most pupils and parents desire and expect. A grammar school teacher received a few days ago from the mother of one of her pupils a written message to this effect: "You should work John's examples for him and explain them; this is what you are paid for, and I want you to do it."—SAMUEL FINDLEY in *Ohio Educational Monthly*.

Our Flag.

Flag of many a battle's heat!
Tho' thy folds have wav'd defeat,
When the feet around thee beat
O'er the field in swift retreat;
Still thy stars undim'd we see,
Leading on to victory;
Still thou floatest proud and free,
Emblem of our unity!

CHARLES ELMER UPTON,
Green Valley, El Dorado Co., Cal.

NORMAL DEPARTMENT.

San Jose.

EVA V. JOSEPH, - - - - - - - - - - Editor-in-Chief
MAY ARBOGAST, - - - - - - - - - - Associate Editor
LEROY ARMSTRONG, - - - - - - - - - - Business Manager

September 22d, we had the pleasure of listening to Mr. P. M. Fisher, editor of the PACIFIC EDUCATIONAL JOURNAL. He was down to complete arrangements for the final transfer of the *Pacific Coast Teacher* to the JOURNAL. Mr. F. K. Barthel and Mr. John G. Jury, former editors of the *Teacher*, are engaged in other work at present, Mr. Barthel as Principal of the Reedley school, Fresno Co., and Mr. Jury as a successful lawyer in San Jose.

As the Normal edited a department in the *Teacher*, a space has been reserved for it in the JOURNAL. The Normals at Los Angeles and Chico will also be represented. The aim of the new department will be to give to public school teachers of the State, especially Normal graduates, enough of our available material to keep them in touch with our work. We hope thereby to establish a communication between the public schools and the Normal schools that will prove of mutual benefit. We ask for the hearty coöperation of all San Jose Normal alumni in this effort.

ALUMNI NOTES.

Since Miss Washburn and Miss Payne have each been granted a leave of absence, and our members have increased so greatly, it became necessary to employ several new teachers at the beginning of the year. Professor A. H. Washburn, brother of Miss Washburn, a graduate of Cornell and student and teacher at Stanford University, was engaged as teacher of Mathematics.

Miss Violet D. Jayne, a graduate of Ann Arbor with the degree B. A., is teacher of English. Miss Jayne has taught successfully as Principal of Crookston, Ind., High School and teacher of English in Oshkosh, Wis., College. She then traveled in Europe, returning to Boston, where she studied till called here.

Miss Etta Kinney has charge of the Biological work during Miss Washburn's absence. Miss Kinney graduated from this school and has taught successfully in the public schools of Santa Clara county. She took the Biological course at Stanford University.

Miss E. Buckingham is teacher of Drawing. Previous to coming here, she studied drawing and painting at the Museum of Fine Arts, Boston, and at the Massachusetts Normal Art School. Miss Buckingham's home is in Cambridge, Mass., where she graduated from the High School.

Miss Ellen F. Kelley, a graduate of this Normal, and a resident of San Jose, is critic teacher in place of Miss Mary P. Adams who succeeded Miss Margaret Schallenberger as Principal of the Training Department. Miss Schallenberger is at present a teacher in the Educational department of Stanford University. Both Miss Adams and Miss Schallenberger are graduates of this school.

Miss Mary C. Maguire was promoted this year from the Receiving grade to Fourth grade at Haywards school.

Scientific Temperance Instruction.

A CLASS LESSON ON ALCOHOL AND THE HEART.

Introduction. Review the properties of alcohol and the experiments that proved that it is contained in wine, whisky, etc.

Main body or lesson proper. Look at a live frog's foot through a microscope. Drop a little diluted alcohol upon it, and you will see that the blood flows much more rapidly than before. Put a drop of stronger alcohol upon it. The blood flies along more rapidly than ever, the blood-vessels expand, and we notice a great many little channels that were before invisible. We know that it is the heart that sends the blood around. What does this rapid flow of blood tell us? That the heart is working harder. Would you like to know how the alcohol placed on the foot can produce this change? The reason is this. There are some of those little messengers of the body called nerves, which we have just begun to study about, that keep watch over the amount of blood that flows through these tubes. They draw the elastic walls together when there is enough blood, and never let them entirely relax unless there is some special work for that part of the body to do. Now this cruel alcohol paralyzes these trusty little

gate-keepers, and the gates that they have faithfully watched all through the frog's life are thrown open, and the blood rushes through; the heart has to keep sending it faster and faster, and, of course, the whole blood system has to work harder and harder.

Now this same thing takes place in the human system when we drink those drinks that contain alcohol. You have noticed that when a man drinks much he goes to sleep. Let us think why. The alcohol passes from his stomach into his blood. It has been proved that two ounces of alcohol (the amount contained in the whisky that intoxicated the man) increases the heart-beats six thousand more in twenty-four hours. This represents the work it would take to lift seven tons one foot high. Could you do it? Do you wonder that the man wants to rest.

Suppose you had three miles to go, and you should start out and run with all your might for two miles; do you think you would be able to go the other mile without a long rest, even if you did not drop from pure exhaustion before you came to the end of the two miles? I think it would be better to walk quietly along to the end. But when men drink intoxicating drinks they do not think of the extra work this deceitful stuff is making the poor heart do. Dr. Richardson, a great English physician, says: "It is hard work to fight against alcohol; harder than rowing, walking, wrestling, coal-heaving, or even the tread-mill itself." There is another reason, also, why men want to sleep after drinking intoxicating drinks, which we shall learn some other time.

Summary. The teacher may put the following outline on the board, and have the class write an essay upon this topic.

I. Observation of a frog's foot.
   (*a*) Effect of diluted alcohol.
   (*b*) Effect of stronger alcohol.
II. (*a*) Cause of the rapid flow of blood.
   (*b*) Effect of this rapid flow upon the heart.
III. Compare this with the effect of alcohol when it passes into a man's blood from his stomach.
IV. Why does a man want to sleep after being intoxicated?
V. Conclusion. What do you think of such a person's judgment?

ROSE ROBERTSON, San Jose.

EDITORIAL.

Margaret E. Schallenberger.



Stanford University is to be congratulated on the addition to its faculty of Miss Margaret E. Schallenberger as instructor in the department of Education. Miss Schallenberger is a native daughter, born and educated in San Jose. She graduated from the Normal School in 1880 and after a successful public school experience, she was called back to the Normal in 1887, as critic teacher in the Training Department. Her ability and energy led to her steady advancement, until she became Principal of the Training School. Meantime her work in the Institutes of the State and her articles in this journal and various Eastern periodicals, had brought her outside recognition as a woman of promise. In calling her to Stanford University, Dr. Jordan has shown his usual skill in discovering genius and opening opportunity before it. In the faculty of the University there are four other women and about eighty men. Miss Schallenberger will be giving regular instruction to University classes in school organization and management and in methods of instruction in secondary schools. She will also be connected with the management of the school which is maintained by the department for Experimental Studies and she will be carrying on outside work with special classes and in Institutes. She has a large field and she will fill it well.

The Pacific Coast Teacher Absorbed.

With this number the *Pacific Coast Teacher* has been merged into the PACIFIC EDUCATIONAL JOURNAL. Messrs. J. G. Jury and Frank Barthel, publishers of the *Teacher*, find their time so occupied in other lines, that they cannot do themselves or their patrons justice in the further publication of the *Teacher*. Mr. Jury is devoting himself thoroughly to the practice of law, in which he shows strong promise of attaining prominence. Mr. Barthel, the popular and efficient principal of the Reedley schools, has a bright future before him.

The *Teacher* started with fair prospects. Absorbing the *Normal School Index*, it was made the official organ of the alumni of the San Jose Normal School. The energy, enthusiasism and large school acquaintance of its projectors won for it good wishes and a very encouraging subscription list. When other and engrossing duties prevented them from fulfilling their early promises, the publishers did the sensible thing, they turned the work over to others, endeavoring to do the best possible for their patrons, by transferring all their rights, interests, franchises, etc., to a journal that could cover the field. This journal will be mailed without further charge to the full term of the paid subscriptions of patrons of the *Teacher*. The Normal Department will be extended so that each of the three Normal schools in the State will have ample space and find contributions warmly welcomed; the school at San Jose will rightfully command considerable attention. To this end the editorial corps elected at San Jose at the opening of the present term will furnish regular contributions. We believe that it would be a wise thing for the hundreds of students at the Normals to become regular readers of the JOURNAL the official organ. They would there find material and experience of benefit to them throughout their course, and upon graduation feel themselves familiar with the system and the every day work of the schools of our great State, —their future field.

The chasm that many feel lies between the professionally prepared teachers and those without such preparation should not be widened by artificial means, but association and good-will should be encouraged and then by "their fruits" the best teachers will be recognized and emulation aroused.

The representatives of the JOURNAL elected by the Seniors at San Jose are Eva V. Joseph, May Arbogast and Leroy E. Armstrong.

Profession—Performance.

ON that delightful October day when the Leland Stanford Jr. University was formally opened to the public and the large audience listened with intense interest to the addresses of the founder and others—addresses the most authoritative of which eloquently set forth the advantages the new institution would offer to woman, it was remarked by not a few, and the reflection seemed to chill the enthusiasm otherwise evoked that not one woman's name appeared on the faculty roll. If this new institution was to be so full of meaning and promise to woman—if every department was to be thrown wide open to her as a student, if this century has already done so much for her, how did it happen that with all the world to choose from not one should have been found to represent her sex in the corps of instructors. It seemed that with all their professions men were to continue to be slow to yield the vantage ground that centuries had given them, and that although the primary and to a degree the secondary schools should welcome her instruction, she must fight her way inch by inch to the professions chair, in our highest institutions even though they be co-educational. But the world moves, the age is practical, performance can not long lag behind profession, and within two years we find four women sharing in the labor and honor of instructors in the great school. And so the movement is toward fair treatment and the time is coming rapidly when value of service will be the sole consideration and sex *per se* have no distinct advantage.

THE cry of the unemployed is heard all over the land. Nor is it confined to those who seek labor in the field and factory. There is a demand for teachers' positions far in excess of the supply. A manager of a Teachers' Bureau in California states that he could concentrate within forty-eight hours in Oakland and San Francisco two hundred and fifty teachers seeking positions. The schools are all in session now, so there are no vacancies. At the close of the current term there will be changes, but meanwhile the Normal schools and County Boards of Education will furnish some hundreds of new applicants eager for employment. The number retired by death, marriage, and the opening of more agreeable or more profitable avenues of industry will not be sufficient to afford places for all who may seek them. And so the pinch threatens to grow more severe. A reduction of salaries

will afford no relief; for this cannot pass a limit fixed by the public itself in its requirements that a teacher should maintain a certain standard of dress, living, etc. And such a reduction would be a premium to incompetency. Something—much perhaps—can be done by insisting upon a superior grade of preparation. This lies in the power of school officials. It should not be a light matter to secure a certificate. The lax moral tone observed in giving recommendations needs severe attention. So notorious has this become that the recommendation ceases to be of value. Boards of education shy at the applicant who presents his scrapbook with its score or more of encomiums signed often by officials who would not vote for him if he came before them for a place, indeed, whom they may have "dropped" for incompetency. In the struggle the fittest should survive—*in the craft*—and not, as is too often the case, outside of it, where place and honor and profit may now be found.

THE Midwinter Fair is not a dream. The site has been prepared, contracts for buildings let, and every effort is being put forth to make the project a great success. If the plans are fully realized it will be a great educational factor in the history of the State, repeating in this matter the experience of the people of the Mississippi valley at Chicago. At a recent meeting of the executive committee of the State Teacher's Association, the subject of an educational exhibit at the Fair was broached. A discussion arose on the question of the utility of school exhibits in general, and our experience with the State school exhibit at Chicago in particular, an experience agreed by all to have been very unsatisfactory. The matter was finally disposed of by referring it to the State Board of Education and the two University professors of Pedagogy, Elmer E. Brown and Earl Barnes.

It does not follow that if a man can write fluently and coherently he can also speak logically.

To the great attention paid to English composition in the State University, Prof. Gayley is adding some admirable work in "Forensics." His class numbers from twenty-five to thirty and the course extends through one term. There is a two-hour debate each week. The discussion must follow the rules of logic. Each member must lead at least once during the course. There are six regularly appointed disputants for each debate, each speaker being limited to five minutes. After they have concluded the entire class may be heard. Judges are appointed, and the Professor who appoints them reviews their decision.

THE editor had a delightful visit at the San Jose Normal recently. He scarcely knew in which capacity Prof. Childs was more to be envied, whether under his own vine and fig tree in his orchard on the banks of the Guadaloupe, or standing in the presence of the more than six hundred brighteyed, eager, enthusiastic young people who fill every available seat in the assembly room of the Normal School. In both places he seemed equally happy and at home.

THE Educational Publishing Company purpose issuing a Souvenir volume in time for the Midwinter Fair. The indications are that the Fair will be a great success. Many of the exhibits at Chicago will be brought here, and the great body of teachers who were unable to go to the Columbian Exposition on account of the high fares, will have an opportunity to see many of its attractions in San Francisco.

A. G. Van Gorder, formerly a principal in the Riverside school, will this term complete a two years course in Pedagogics under Prof. Brown of the State University. At a recent meeting the regents appointed him assistant in the department of Physics.

THE *San Jose Mercury*, one of the very brightest newspapers in the State, shows its appreciation of Earl Barnes' article in the September JOURNAL by devoting a column to it editorially. The *Oakland Times* gave it equal consideration.

WILL S. MONROE is contributing a series of letters to the *New England Journal of Education* upon the educational exhibits at Chicago. They are well worth reading.

THE San Francisco *Examiner's* recent editorial on "The Limits of Public Education" deserves a vote of thanks from the friends of high schools throughout the State.

GOVERNOR MARKHAM has placed Prof. Allen in charge of the distribution of the literature pertaining to the resources of California at the World's Fair.

SECRETARIES of Institutes will place the JOURNAL under many obligations, if they will kindly send us reports of proceedings.



Madge Morris Wagner, Editor "Golden Era," San Diego, Cal.

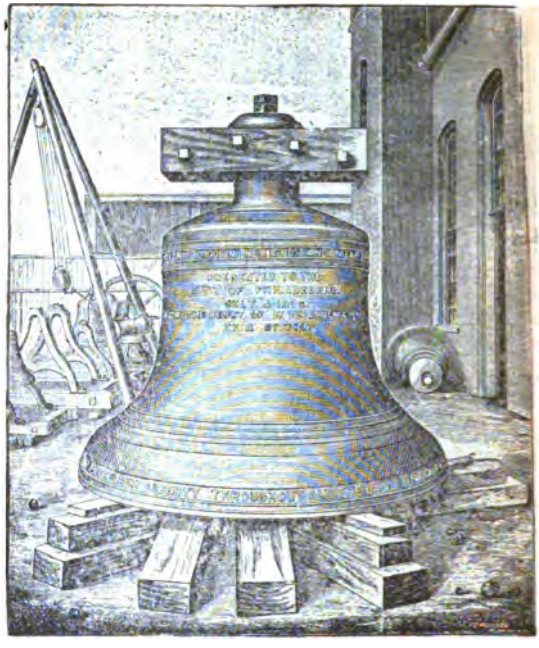
We present in this number of the JOURNAL the portrait of Mrs. Madge Morris Wagner, whose famous poem was the inspiration of the patriotic movement which resulted in the creation of the New Liberty Bell.

A picture of the bell is also given and we reprint the poem which has brought fame to its author. Mrs. Wagner is the wife of County Supt. Harr Wagner, of San Diego. The poem was written some years ago, and a copy tacked up beside Old Liberty Bell in historic Independence Hall. Philadelphia gave to Wm. O. McDowell, a liberty-loving patriot of Lincoln Park, Newark, N. J., the inspiration to build a Columbian Liberty Bell. He began the work. His children were the first contributors; then the Daughters of the Revolution took it up. Then the governors of all the States appointed committees, and it grew, and grew, until 250,000 historical relics and gifts were received to be moulded into this bell. So it became the great National Bell, and will be the most noted and the most peculiar the world has ever seen. Chicago took it up, and the great city, by its legal authorities, set apart July 4th, 1893, as Liberty Bell day, and gave to Mrs. Madge Morris Wagner and Wm. O. McDowell the freedom of the city. It has been customary since the world began, to recognize high officials, but seldom have cities so honored those whose best endeavor has been in the direction of the sentiment and soul of liberty.

The Californians were proud of the honor and the achievements of Mrs. Wagner, and tendered her a reception that formed one of the notable gatherings in the building made so famous by the hospitality of California's best products—the women.

The New Liberty Bell weighs thirteen thousand pounds, and was rung by Mrs. Wagner for the first time July 4, 1893. Wm. O. McDowell, the patriot and chairman of the committee of

sixty, in creating the bell carried out the idea: "It is built of the treasure of fond human hearts." It contains the gifts of more than two hundred and fifty thousand people, representing everything from the clapper of the Old Mission bell to Baby Ruth's first gold ring. The Liberty Bell is to ring out for liberty on the anniversary of every great event, celebrating freedom, and upon the birth of all the great patriots.



The Columbian Liberty Bell.

Liberty's Bell.

BY MADGE MORRIS WAGNER.

There's a legend told of a far-off land—
The land of a king—where the people planned
To build them a bell that never should ring
But to tell of the death, or the birth, of a king,
Or proclaim an event, with its swinging slow,
That could startle the nation to joy or woe.

It was not to be builded—this bell that they planned—
Of common ore dug from the breast of the land,
But of metal first moulded by skill of all arts—
Built of the treasures of fond human hearts.

And from all o'er the land like pilgrims they came,
Each to cast in a burden, a mite in the flame
Of the furnace—his offering—to mingle and swell
In the curious mass of this wonderful bell.

Knights came in armor and flung in the shields
That had warded off blows on the Saracen fields;
Freemen brought chains from the prisons afar—
Bonds that had fettered the captives of war.
And sabers were cast in the molten flood
Stained with the crimson of heroes' blood.
Pledges of love, a bracelet, a ring,
A gem that had gleamed in the crown of a king;
The coins that had ransomed a maiden from death,
The words, hot with eloquence, caught from the breath
Of a sage, and a prayer from the lips of a slave
Were heard and recorded, and cast in the wave
To be melted and moulded together, and tell
The tale of their wrongs in the tones of the bell.

It was finished at last, and, by artisan hand,
On its ponderous beams hung high over the land.
The slow years passed by but no sound ever fell
On a listening ear from the tongue of that bell.
The brown spider wove her frail home on its walls,
And the dust settled deep in its cavernous halls.
Men laughed in derision, and scoffed at the pains
Of the builders; and harder and harder the chains
Of a tyrannous might on the people were laid;
More insatiate, more servile, the tribute they paid,
There was something they found far more cruel than death
And something far sweeter than life's fleeting breath.

But, hark! in the midst of the turbulent throng,
The moans of the weak and the groans of the strong,
There's a cry of alarm. Some invisible power
Is moving the long silent bell in the tower.
Forward and backward, and forward it swung,
And Liberty! Liberty! Liberty! rung
From its wide, brazen throat, over mountain and vale,
Till the seas caught the echo and monarchs turned pale.

Our forefathers heard it—that wild, thrilling tone,
Ringing out to the world, and they claimed it their own.
And up from the valley, and down from the hill,
From the flame of the forge, from the field and the mill
They paid with their lives the price of its due,
And left it a legacy, freemen, to you.
And ever when danger is menacing nigh,
The mighty bell swings in the belfry on high,
And men wake from their dreams, and grasp in affright,
Their swords, when its warning sweeps out in the night.

It rang a wild pæan o'er war's gory waves
When the gyves were unloosed from our millions of slaves;
It started with horror and trembled a knell
From ocean to ocean, when brave Lincoln fell.
And again its wild notes sent a thrill through the land
When Garfield was struck by a traitorous hand.
And once in each year as time onward rolls,
Slowly and muffled and mournful it tolls
A dirge, while Columbia pauses to spread
A tribute of love on the graves of her dead.

While Washington's name is emblazoned in gold,
While the valor of Perry, or Sherman is told,
While patriots treasure the words of a Hayne,
The fiery drops from the pen of a Paine;
While dear is the name of child, mother or wife,
Or sweet to a soul is the measure of life,
America's sons will to battle prepare
When its tones of alarm ring aloud on the air;
For Liberty's goddess holds in her white hand
The cord of the bell that swings over our land.



OCTOBER, 1893.

J. W. ANDERSON, - - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - - Deputy Superintendent of Public Instruction

The following decisions have been rendered since the last reported:

501. There is nothing in the law that will authorize a County Board of Education to establish a post-graduate course in the grammar schools, whether a high school has been established or not.

502. A vacancy occurring in the position of clerk of a Board of Trustees by reason of the non-residence of the party elected to that position, or for any other reason, must be filled by the Superintend-

ent of Schools. The Board of Trustees can elect a clerk only on the first Saturday of July.

503. The law in regard to the establishing of county high schools does not require a majority of all the votes cast at a general election, but only a majority of the votes cast upon the particular proposition to establish a high school.

504. The acts of a *de facto* officer are valid. See note to Section 220 of the Political Code.

505. A County Board cannot grant a certificate of any grade to any party without examination, except as provided in Section 1775 of the Political Code. This Section does not authorize the recognition by any Board of any kind of diploma from any institution outside the limits of the United States, nor of any institution within the limits of the United States, unless such institution has been accredited by the State Board of Education of this State as being of the same rank as the University of California.

506. When a new school district is formed it is not entitled to any apportionment of funds belonging to the school year in which it was formed. The children of the new district are, by law, entitled to attend the school in the district from which the new district was formed until the 1st day of July next succeeding the formation of the new district. The school in the new district should not be opened until after the first day of July next succeeding; if it is opened it must be supported by private means.

507. There is no provision of law by which a district included among those voting to establish a union high school can be released from the union; nor is there anything in the law empowering a Board of Supervisors to change a high school district.

508. Section 2 of the Rules and Regulations of the Public Schools adopted by the State Board of Education in accord with the law, empower Board of Trustees to fix the hour for the closing of the daily session of the school, as well as the hour for the opening of the daily session. There is no doubt of their authority to close the daily session at three o'clock in the afternoon, if they deem it best to do so.

509. There is nothing in the law that will prevent a teacher from giving instruction to pupils outside of school hours, except that when the teacher is a member of a Board of Education he is not at liberty to specially train pupils for teacher's examinations. If the Trustees desire to permit a teacher to use the school building for the purpose

of giving instruction to pupils outside of the regular school hours, they are at liberty to do so.

510. No Board of Education in this State can legally recognize normal school diplomas, except such as have been granted by State normal schools in the United States; nor is any Board authorized to grant any other than primary or grammar grade certificates upon normal school diplomas.

511. There is nothing in the law that will authorize a Board of Trustees to close a school at an early hour in the afternoon in order to accommodate a high school.

512. In granting special certificates, the Board of Education must indicate upon the certificate the special branch which it authorizes the holder to teach; and the holder is not authorized to give instruction in any other branch than that indicated in the special certificate. (See Section 1771, subdivision third, subhead 3, of the Political Code.)

513. A teacher holding a grammar grade certificate cannot be employed to teach any branches in a high school. The certificate must always correspond in grade with the grade of the school.

514. A teacher holding no other than a special certificate cannot be legally elected as the Principal of a high school.

At the meeting of the State Board of Education, held on September 1st, quite a number of Life and Educational Diplomas were granted. The names of the parties to whom diplomas were granted are now being inserted; as soon as this is done the diplomas granted at the June meeting of the Board, and also those granted at the September meeting, will be sent to the Superintendents. Those granted in June would have been sent some time ago, but as new forms of diplomas had been rendered necessary by the amendments to the law, it was deemed desirable to withhold the issuing of the diplomas until the new forms could be obtained.

The State Board at its late meeting adopted the following Rules for the Recognition of Institutions under the provisions of Section 1775 of the law, as amended by the last Legislature; also for the government of Boards of Education in granting high school certificates under the provisions of said section. These were embodied in a circular and sent to the several Superintendents:—

Resolved, That the State Board of Education in this State, in recognizing Universities and Colleges, as provided in Section 1775 of the Political Code, as amended March 23, 1893, shall be guided by the following Rules:

1. All applications for recognition shall be made by the Faculty of the institution soliciting recognition, and shall be accompanied by a copy of the Course of Study in the Pedagogical Department of said institution, and by a detailed statement of the amount of professional training required for graduation from said department.

2. In considering all applications the State Board shall carefully examine the merits of the Course of Study in the Pedagogical Department of the institution soliciting recognition, as compared with the Course of Study in the corresponding department in the University of California.

3. When any institution shall be recognized, notice of such recognition shall be sent to the Superintendent of Schools in every city and county in the State, and it is hereby made the duty of the Secretary to transmit such notice without delay.

Resolved, That the City and County Boards of Education, in accepting recommendations of applicants for high school certificates, under the provisions of Section 1775 of the Political Code, from Universities and Colleges recognized by the State Board of Education under the provisions of said section, must be governed by the following Rules:

1. The recommendation must be issued by the Faculty of the institution from which the applicant graduated, and must be signed by the President and Secretary of the Faculty, and have the seal of the institution attached.

2. Such recommendation must clearly set forth the amount of professional training which the applicant has had in the institution by which he is recommended.

3. The amount of such professional training must in no case be less than that required by the University of the State of California, as specified in the Register thereof.

4. It shall be the duty of the City and County Superintendents to provide and keep in their respective offices the latest edition of the Register of the University of California, for the use of the members of their respective Boards.

5. No Board shall consider the application of any party who is not a graduate of the Pedagogical Department of an institution that

has been recommended by the State Board of Education in this State.

6. No Board shall consider applications presented by parties who are not residents of the State of California.

The Board adopted also the following resolution:

Resolved, That this Board will hereafter recognize the credentials upon which the recommendatory Life and Educational Diplomas granted prior to June 2nd, 1893, and subsequent to the adoption of the new constitution, were granted; and that, upon presentation of said diplomas for cancellation, and payment of the proper fee for the issuing of the new, the Board will grant Life and Educational Diplomas under the law as amended by the Legislature, March 23rd, 1893.

The Board adopted also the following resolutions:

Resolved, That hereafter it shall be the duty of the Secretary of this Board to return to the Superintendent of Schools in the respective city or county, all papers accompanying the application of any party recommended by the Board of Education in the city or county, respectively, for a Life Diploma, an Educational Diploma, or a Normal Document, unless the affidavit accompanying said application distinctly specifies, from the first date thereon to the last date thereon, the time of experience of the applicant; which time shall in no case be less than ten *calendar* years for a Life Diploma, five *calendar* years for an Educational Diploma, and two *calendar* years for a Normal Document.

Resolved, That no application will be considered by this Board, unless the certificate accompanying the application clearly shows upon what the original certificate was granted.

It may not be amiss to state that the Normal Document is a document which the State Board of Education is authorized to issue, upon the recommendation of Boards of Education to holders of Normal School Diplomas issued by the California State Normal Schools, who have had two years' successful experience subsequent to their receiving the diploma. The effect of this document is to render the Normal School Diploma a permanent authorization to teach in any Primary or Grammar school in the State. It thus makes the Normal School Diploma the full equivalent of a Grammar Grade Life Diploma.

No fee was provided for in the law to meet the expense of issuing this document on parchment; but the Superintendent of Public Instruction believing that graduates of the Normal Schools would in

many, if not most, cases prefer the parchment to the mere paper form, had a stone prepared, and parchment documents will be issued instead of the paper to those desiring the parchment, and who are willing to pay the expense incident thereto. This expense is one dollar. Unless applicants signify their desire to have the parchment, and remit the fee with their applications, the paper form will be issued.

The next meeting of the State Board of Education will, by order of the Board, be held at Stockton at the time of the meeting of the State Teachers' Association.

The bound copies of the School Law are not yet ready to be sent out. The pamphlet copies have all been sent. I desire to impress upon Boards of Education, Superintendents, and teachers the necessity for taking proper care of the copies sent to them. The present edition must last for two years; and, in order that it may,. it will require care in the preservation of the copies. One bound copy will be sent to each school library, and, when received, must be marked as a library book, and kept in the library as a reference book for the use of the teachers. It is to be hoped that all will see the desirability of being careful to preserve the copies, and of transferring them to their successors.

There has been a demand for State books much greater than usual, and, in consequence, the force in this office have been required to do an inordinate amount of work. The Advanced Geography has been completed, and from letters received from Superintendents and others, we opine that it will meet with favor.

The work of reviewing the Readers is being prosecuted with zeal, and thus far very successfully.

THE University of Virginia is now one of the most perfectly equipped institutions in the country for the athletic student. Its new gymnasium cost $40,000. It is furnished with a swimming pool, tub, needle and shower baths, a bowling alley and barber shop, a handsomely furnished trophy room and ball cage, all on the first floor. On the second floor is the gymnasium proper, fitted up with the most improved apparatus, and a swinging gallery with a running gallery and a track of twenty-four laps to the mile.—*Palo Alto.*

CALIFORNIA SCHOOL ITEMS.

COUNTY SUPT. NUNER slew a 700 lb. bear during vacation.

DRAWING has been added to the High School course in Stockton.

THE Napa County Institute will convene in Napa, Wednesday, October 18th.

THE Throop Polytechnic Institute opens the new term with an increased attendance.

THE San Bernardino High School has an enrollment of 220. The Berkeley High School has 190 pupils enrolled.

PROF. GREENE, of the State University, was elected President of the Botanical Congress which met in Madison, Wis.

PRINCIPAL E. H. WALKER, of the Hanford High School, was married recently to Miss Effie Bagley, of Los Gatos.

A NEW school house is to be built in Hay Fork district, Trinity county. A special tax has been voted for this purpose.

MRS. W. D. ENGENHOFF, County School Superintendent of Mariposa county, is teaching the Pea Ridge school, vice Miss Coughran resigned.

W. H. PEPPER, a generous citizen of Petaluma, has bequeathed a fine lot and an endowment fund of $15,000 to found a free kindergarten in Petaluma.

J. T. CARSON, formerly principal of the Weaverville school, died at Simcoe, Ontario, Aug. 19. He was principal of the Simcoe school at the time of his death.

THE Ione school opened Sept 4th, with a full attendance and the following teachers; Benj. F. Wulff, Principal, Mrs. Mattie La Grave and Miss K. Ludgate, Assistants.

THE Los Angeles School Board is discussing the matter of issuing bonds to erect new school buildings, to meet the rapidly increasing attendance in the public schools of the city.

MR. A. M. CHADWICK, after an absence of two years in St. Paul, Minnesota, has returned to California, and on Monday last took charge of the public school in Mariposa district, Merced county.

A LECTURE association has been organized in Tulare, and a hundred citizens have subscribed $5 each, to guarantee the success of the enterprise. Other progressive communities in the State would do well to follow the good example set by Tulare.

THE annual hop-picking vacation of the St. Helena school has become quite popular. During the two weeks this season the children earned nearly $1,300. The employment of the school children in this healthful work has an educative value far more important than the money thus earned.

THE Coronado High School has the following corps of teachers and special work of each: Hugh J. Baldwin, mathematics, physics, chemistry; Miss Ora Boring, English, Latin, zoölogy, history; Miss Emma Meyer, German language; J. E. Sota, Spanish language; Mrs. M. F. Taylor, short-hand and mathematics.

THE new High School building in Haywards will be completed about November 1st. The building contains six rooms and is well adapted to the purpose for which it is intended. Principal Jordan reports the school in a flourishing condition, with flattering prospects for still more extended growth and a wider usefulness.

COUNTY SUPT. ARMSTRONG, of San Luis Obispo, is urging the patrons of the High School to provide more suitable accommodations. He says: "The building at present occupied is in every way inadequate and ill adapted to the purpose. A new building eligibly located would greatly stimulate the school. San Luis Obispo can hardly afford to sit idly by while other towns around us are going right to the front. '

IN Park Hill district, San Luis Obispo county, under the forms of law, the trustees took such action as resulted in a change of location of the school house. Some of the protestors claiming to have donated toward the construction, objected with such force that somehow the window sashes have been taken out of the building and a large amount of valuable library property is missing. Mrs. Alexander, the teacher, has lately been holding forth under the umbrageous protection of a live-oak.

AGREEABLE to an ordinance of the Board of Supervisors of Amador county, our County School Superintendent, Prof. Geo. F. Mack, will now devote his whole time to the superintendency of the schools of the county. For the past twelve years, Prof. Mack has been the popular principal of the Ione school, and many of his old pupils are teaching in various parts of the State. While teaching the

professor received $600 per annum for his services as Superintendent. He now receives $1200 and traveling expenses.

THE following is one of the rules of the Mariposa County Board of Education which is of interest to teachers: Certificates without examination will also be issued by this Board to holders of Grammar Grade and High School Certificates showing a standing not less than 85 per cent., issued on examination by the Boards of Education of their counties: the application to be accompanied by proof satisfactory to the Board of successful experience as a teacher in the public schools of this State for a period of not less than two school years, provided that the provisions of this rule shall not extend to holders of certificates issued from counties which do not concede equal privileges to the holders of certificates issued by Mariposa county.

SUPT. ARMSTRONG, of San Luis Obispo county, in a circular letter to his teachers, says that while in nearly every district in the county the funds were entirely exhausted at the close of the year ending June 30, 1893, ample funds for the payment of all demands will be apportioned not later than January 15, 1894. The county funds collected and available for apportionment will be ready for disbursement on or before December 16, 1893, and it is recommended that teachers who find it necessary to discount their orders, will request clerks of Boards of Trustees to draw the same on the county fund, thus saving themselves one month's time on term of discount. In view of the unfortunate condition of the funds, and hardships entailed, he suggests that teachers and other creditors of the school department, curtail their expenditures to the lowest possible point and hold their orders until the apportionments are made.

TEHAMA CO.—County Superintendent Belle Miller spent several weeks at Chicago. She is again in the office. Principal O. E. Graves spent his vacation, while not fruit farming, at Mountain Home. He has recovered his health and is now at work. His school opened September 11th. Principal J. D. Sweeney began work on the 18th. He improved his leisure months in San Francisco, visiting the leading schools. Vice-Principal G. K. Bingham, of Red Bluff, was located at Plateau during the warm weather. Sarah L. Owens, recently of Corning, has decided to teach a small, private school in connection with her public school duties. The fortunate young man to thus receive instruction is T. I. Howell, druggist, of Corning. They were married on August 17th, at Santa Cruz. Mrs. Howell will teach in

Vina this term. Misses Fannie E. Johnston, Anna Morgan, Anna Buckley and Dora Gilmore, all of Red Bluff school, visited the "White City" during the summer. Miss Garwood will teach at Antelope this term. Messrs. Lafe and Ed. Warmoth have concluded that it is not good for ye pedagogue man to live alone. Both were married this year. Ed. will teach at Lowrey's and Lafe at Kirkwood. The new Board of Education elected J. J. Grinell, President. The remaining members are Mrs. T. F. Howell, Miss Retta Counsil and G. K. Bingham. Miss Alice Wright succeeds Miss Frances Bootherton, in Red Bluff. The remaining teachers are the same as last term. Tehama retains the same trio of teachers as last term. Henry C. Swain has left us. He is teaching in Plumas. Lillie Clinton, of Paskenta, has concluded that Scribner sounds better than Clinton, and as Mrs. Butler Scribner, Jr., will teach the Elkins school this winter. S. F. Stuckey, "The Wandering Pedagogue," well known from Modoc to San Diego, is now teaching at Mendocino. Next! We notice with pride an excellent article in the JOURNAL, from the pen of E. B. Warmoth. Our last budgets were mistaken by the JOURNAL editor for a spring poet's effusive epodes and as such were promptly waste-basketed. No high school! Large classes in Red Bluff, Tehama, Corning and elsewhere, and no high school. Taxes too high! Our rate now is twenty cents higher than last year. Our public school rate only seventeen cents. Curtail expenses by beginning at the foundation of our republican form of government. Send out hundreds of dollars annually to educate our boys and girls abroad, when we should keep them and the money at home. Economy? No. In other counties, in Union districts, the high school tax is alone twenty cents. Witness Elmira in Solano county. Tehama, wake up! S.

ERRATUM:—By the substitution of a period for a comma after "Independence Hall" and the omission of a comma after "Philadelphia," on page 413 of this number of the JOURNAL, the compositor has made us say that "Philadelphia," and not the "Liberty Bell Poem," gave the inspiration for the creation of the Columbian Liberty Bell.

OUR LIBRARY TABLE.

MAGAZINES.

As an illustration of the money paid to writers as soon as they acquire a reputation, the September *Cosmopolitan* contains less than 8,000 words. for which the sum of $1,666 was paid. Ex-President Harrison, Mark Twain and William Dean Howells are the three whose work commands such a price. The September number has more than one hundred illustrations, giving the chief points of interest in the Columbian Exposition, and the Fair is treated by more than a dozen authors.

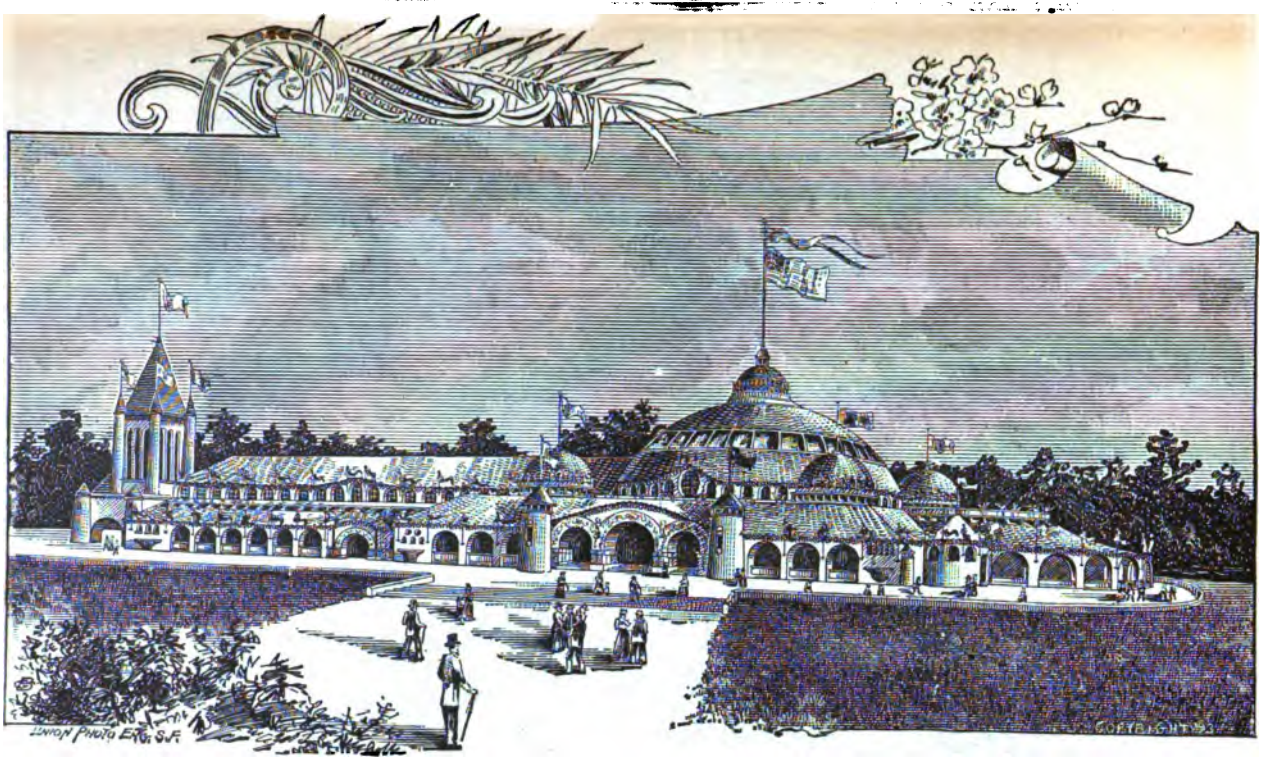
THE *Atlantic Monthly* for September contains a reply to Professor Shaler's "Relations of Academic and Technical Instruction" which appeared in the August number. It is by General Francis A. Walker, and is a most able defense of the system of the independent technical school. These two papers, covering both sides of an important educational question, should be read by all teachers.

Godey's Magazine for October is better than ever. The contents are varied and the illustrations are up to this Magazine's high standard. The complete novel this month—the feature of this publication—is by Sophie Frances Baker, and is called "The Real Tom Bronson."

IN *Scribners Magazine* for September Gustave Kobbe describes the remarkable high tides of the bay of Fundy, with illustrations from photographs which show the reversing of the current of the St. John river. Edward J. Lowell, has a charming essay on the evolution of clothes from the toga to trousers, with a series of illustrations by W. L. Taylor.

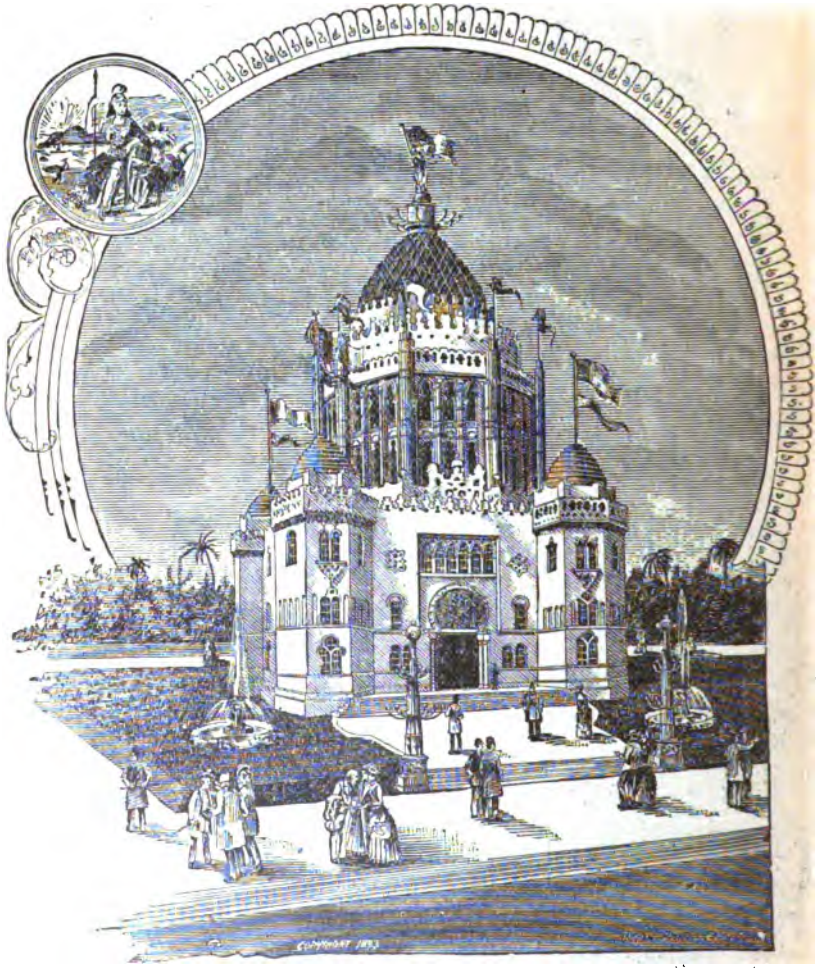
North American Review for September opens with an article on "The Political Situation," by Ex-Speaker Reed; "An English View of England and France in Siam," is furnished by the Hon. George N. Cunzon, M. P., and "A French View" by Madam Adam. "Polar Probabilities of 1894," by Gen. A. W. Greeley; "The House of Lords and the Home Rule Bill," by the Right Hon. Earl of Donoughmore; "The Wealth of New York," by the Mayor of the City, Mr. Gilroy; Rev. J. A. Zahm discusses "Christian Faith and Scientific Freedom;" "Play Writing from an Actor's Point of View," by W. H. Crane; "The Counting Room and Cradle," by Marion Harland; and Dr. Henry Smith states the "Lesson of Heredity." The silver problem is treated by Andrew Carnegie in "A Word to Wage-Earners."

THE *New England Magazine* for September opens with an interesting account of the literary associations of Berkshire. It is written by James Tucker Cutler, and is profusely illustrated with portraits of the eminent men who have lent an additional interest to the beauties of the Berkshire hills. Other articles of interest are: "The American Not an Englishman," "Fryeburg," illustrated, by John Stuart Barrows; "War Memories of a Confederate Boy," by Robert Yulee Toombs; "An Agricultural Experiment Station," illustrated, by A. B. Ward; No. 4 of "Experiences During Many Years," by B. P. Shillaber; "New St. Louis," by Ellen Burroughs, and the Editor's Table and Omnibus. $3 a year; single copy, 25 cents. Boston: 5 Park Square. Warren F. Kellogg.



CALIFORNIA MIDWINTER INTERNATIONAL EXPOSITION.

AGRICULTURAL AND HORTICULTURAL HALL.



CALIFORNIA MIDWINTER INTERNATIONAL EXPOSITION.

ADMINISTRATION BUILDING.

THE

PACIFIC EDUCATIONAL JOURNAL.

Official Organ of the Department of Public Instruction of alif ornia,

VOL. IX. NOVEMBER, 1893. NO. 11.

CURRENT EDUCATIONAL THOUGHT.

NOT AMUSEMENT.—The education that takes place through amusement dissipates thought; labor of some sort is one of the great aids of nature; the mind of the child ought to accustom itself to the labor of study, just as our soul to suffering. You will teach a multitude of things to your child by means of pictures and cards, but you will not teach him how to learn.—MADAME DE STAEL.

SUPERVISION, to be of any value to our schools, must mean more than merely visiting schools, talking with teachers, and making little speeches to the children. Among other duties, supervision must include the careful arrangement of the school work in detail, must help to broaden the views of the teacher as to the needs of the child and enlarge her knowledge of progressive educational methods, and must secure close adherence to the course of study and the program of daily work.—SUPT. DE BURN, San Diego.

WHILE 'tis true that the young man or women who takes the manual training course may master any one of a score of arts, trades or callings in months, where the average man or woman requires years, it is far from true that this training is only or chiefly valuable to the boy who is to be a carpenter, a blacksmith, a draughtsman, architect, a machinist, an engineer or an artist. For the physician or surgeon no preparatory training is worth more. For the lawyer, in this day of endless commercial litigation, what preparation is better? For the preacher, what training can better fit him to appreciate the condition of the masses of the people? And as "Learn to do by doing" becomes something more than a fine institute sentiment, such training for the teacher is indispensable. The man who has to man-

age large commercial, manufacturing or constructive enterprises needs such training for the protection and economic expenditure of his capital, more than the laborer needs it for the winning of his livelihood.—PRES. C. H. KEYES, Throop Polytechnic Institute.

THERE are dangers that threaten our "new educational methods" at the present time. One is the natural outgrowth of freedom after long repression, and the other is a reaction from this freedom. In many of the primary schools all over our country at the present time, and even in the higher grades, freedom has developed into restless, ever-demanding activity on the part of the children, and nervous, overworked teachers.

What does this activity of the children demand? little short of the life and heart's blood of the teacher. This teacher must be a walking encyclopedia of learning—though, alas! often a very poor edition. She is told that she must "be kind to the children;" and for a similar reason that "Mary was kind to the big dog," she humors and molly-coddles, until the children, surfeited with jelly and jam, have no honest appetites for anything really wholesome. Is it any wonder that those who do not realize the possibilities that result from wiser and better-directed effort when the child is led to do his part, and do it with all his heart—I say, is it any wonder that they cry, "Is this your new education? Where is the honest effort to master the task, to learn the lesson, to overcome the difficulty?" The effort is often entirely with the teacher, who not only does all her own work; but, with the best intentions possible, all the children's too. She spreads before the children a mass of disconnected and trivial devices whose only claim to notice would be their ingenuity in the marvelously bad combinations in form, color, or design. She works hard, and the children do not. The American taste for novelty—which, by the way, is the bane of our country—seizes her also, and a method, even if it prove good, is only temporary. To be sure, in educational methods there are change and growth; but it need not be with every new moon; and a really good method in the presentation of a subject should not be put aside like the fashion of a year.—HANNAH J. CARTER, Drexel Institute.

THERE are two kinds of education. The first may be called substantial education—the education by means of the memory; the education which gives to the individual methods and habits and the fundamentals of knowledge. It is this education which the child be-

gins to receive from its birth. This sort of education is education by authority—that is, the individual accepts the authority of the teacher for the truth of what he is told, and does not question it or seek to obtain insight into the reason for its being so. It is this education by authority—the education of the past—that the modern or second kind of education seeks to supersede. This second kind may be called individual or scientific education; it is the education of insight as opposed to that of authority. When this kind of education is acquired, it frees the individual from the authority of the other. Under the system of education by authority, when told, for instance, that the sum of three angles of a triangle is equal to two right angles, this will be blindly believed only as long as authority sanctions this belief; but when an insight into the reason for this geometrical truth is obtained, no change of authority is able to make the individual doubt. But there is this danger in the system of education by insight, if begun too early, that the individual tends to become so self-conceited with what he considers knowledge gotten by his own personal thought and research, that he drifts toward empty agnosticism with the casting overboard of all authority. It is therefore necessary that this excessive conceit of self which this modern scientific method of education fosters, be lessened by building on the safe foundations of what has been described as the education of authority. The problems of the reform movement centre, therefore, on the proper method of replacing this authoritative or passive method of education by education through self-activity.—HON. W. T. HARRIS.

The Real Boy.

What curious kinks in what he thinks!
This world he keeps perplexed;
Amid our drifting sands a sphinx,
The rebus of the next.

The boy that's spry a thing will spy,
And wonder what it is;
He wants to know the how and why—
The real boy must quiz.

N. W. FREDERICK.

Lodge, Calif.

GENERAL DEPARTMENT

The World's Educational Congresses.

BY WILL S. MONROE, STANFORD UNIVERSITY, CAL.

There was held at Chicago during the summer vacation a series of great educational meetings, at which the world's most distinguished workers met for mutual discussion. There have been larger meetings in America of school men and women than the International Columbian Congress; but none which included so many distinguished participants. The civilized nations all sent their leaders; and the papers which they read and the addresses which they delivered would, as the deservedly famous French educator, M. Gabriel Compayrè, has so shrewdly remarked "constitute a veritable *encyclopedie pedagogique.*"

America has always been proud of Dr. William T. Harris; but never prouder than since the Chicago congresses. His great good sense in planning and his rare tact in carrying into effect such a diversified program, certainly entitles him to large consideration as an educator and executive; and the warm regard which the foreign representatives manifested toward him, was certainly a compliment of no uncommon order.

A few of the educational leaders on this side of the Atlantic were absent—notably Judge Draper and President Eliot; but most of the men and women of whom we are proud were present and took part in the proceedings. President G. Stanley Hall, of Clark University, was there throughout, and he made the department of experimental psychology a great success. President James MacAllister, of Drexel Institute, added his meed of praise to the modern French pedagogy. The venerable and much beloved Henry Barnard, now four score and three years old, and the only American delegate to the World's Educational Congress held at London forty years ago, attended all the sessions and honored several of the departments with addresses. Presidents Gilman, of Johns Hopkins, and Angell, of Ann Arbor, as well as "the grand old man," Ex-President McCosh, of Princeton, also honored the congresses with their presence.

Of the distant States, none were better represented than California. The writer counted no less than fifty-nine teachers from the Golden State at the educational congresses, and fully a dozen of these took some part in the proceedings. Mrs. Sarah B. Cooper, of whom the California delegation were very proud because of her good work on the Pacific Coast, received most recognition. Besides presiding at several of the congresses, she read no less than a score of papers, and whenever she spoke she was received with enthusiasm. Next in point of recognition was Professor Earl Barnes, of the Leland Stanford Junior University, who read a half dozen of the strongest papers and took part in several discussions. His experimental studies of children attracted wide-spread attention. Professor Elmer E. Brown, of the University of California, admirably filled the post of honor at the Herbartian meeting, and President Martin Kellogg and Professor Bernard Moses of the same institution gave interesting papers. President David Starr Jordan, of the Leland Stanford Junior University, in the department of higher education, made a vigorous protest against the requirement of Greek for the B. A. degree; and Dr. T. D. Wood, also of Stanford, had a paper on physical education. Mrs. Kate Douglas Wiggin distinguished herself as usual by the bright paper which she read. Miss Emma Marwedel prepared a paper which was read by Mr. Boyd; and Mrs. Kate Tupper Galpin, of Pasadena, and Mrs. Alice Tomey, of San Francisco, each read papers. The writer read before the congress of educational literature a paper on the "Educational Labors of Henry Barnard."

Other Californians who attended the educational congresses were: Fernando Sanford, Margaret E. Schallenberger, Mrs. Arthur Washburn, W. O. Black and O. L. Elliott, of the Leland Stanford Junior University; W. D. Armes, of the University of California; E. T. Pierce, Juliet Powell Rice, and Harriet Dunn, of the State Normal School at Los Angeles; George R. Kleeberger, Mary P. Adams, and Arthur Washburn, of the State Normal School at San Jose; Hattie Morris, Esther Wilson and M. L. Seymour, of the State Normal School at Chico; W. T. Reid, of the Belmont School for Boys; Elizabeth A. Packard, Mary E. Foy, Mrs. Nora D. Mayhew, Olga Dorn, Mrs. Caroline Alden and Louise Hutchinson, of Los Angeles; Allan Peck, Amelia A. Dranga and Mrs. Porter, of San Diego; L. L. Evans, Mary M. Smith, and Mrs. Crane, of Pasadena; Rose Gleason and D. A. Eckert, of San Bernardino; Nora A. Smith, Mrs. Dorville Libby, N. E. Boyd and Harriet Cooper, of San Francisco; Mr. and Mrs. Chas. A.

Wilkinson, of Berkeley; Clara K. Whittenmeyer, of Mills College; Supt. F. McG. Martin, of Sonoma county; Ex-Supt. A. J. Tiffany, of Nevada county; Salina Burston, of Auburn; Chas. Turner, of Visalia, and there may have been other Californian teachers in attendance whom the writer did not know.

Canada sent a goodly number of her teachers to the congresses. First and foremost there was Inspector James L. Hughes, of Toronto, who is as well known and much admired in the United States as in his own country. Both Mr. and Mrs. Hughes rendered valuable services at the Chicago congresses. Minister Ross and his deputy, Mr. Miller, were both present, and extended greetings to the assembled educators from the Ontario educational department. Two of the younger Canadian schoolmen—R. K. Rowe, of Kingston, and S. B. Sinclair, of Hamilton,—who are growing into leadership in Canada, made many friends at Chicago. Mr. Rowe has once or twice been tendered positions in California, but he has never seen fit to leave Kingston.

Miss Hulda Lundin, one of the school superintendents of Stockholm, Sweden; Miss Kristine Frederiksen, of Copenhagen, Denmark; and Madam Magnusson, of Iceland, represented very creditably the north of Europe. Miss Lundin's exhibit in the Swedish building was one of the finest of its kind at Chicago, and Miss Frederiksen was one of the most painstaking of the judges of the educational exhibits. There were a number of other distinguished women from Europe—Frau Anna Simpson, of Breslau, Germany; Miss Elizabeth P. Hughes, principal of the Training College at Cambridge, England, and whose papers were characterized by such careful preparation; Mme. Cervantes, of Turkey; Mlle. Zampini-Salazar, of Italy; Miss Amy Bramwell, of England, and H. M. Hughes, of Wales.

The men from Europe were no less distinguished than the women —Dr. Stephen Waetzoldt, of Germany. Dr. Karl D. Bülbring, of Holland, Joseph Korensky, of Bohemia, Prince Wolkonsky, of Russia, Professor Lagerstedt, of Sweden, Bela Krécsy, of Hungary, and Mr. Vaughn, of London; and there were a number of prominent men from the South American States and from the Orient.

But the most distinguished delegation at Chicago was from France. The Third Republic sent her strongest men and women, and they won a place in the affections of American teachers that will long link France to America. At the head of this delegation was no other than the world-famous Mons. Gabriel Compayrè, who is as well known

in America as in Europe by the excellence of his pedagogical writings. M. Compayrè, although he did not speak English, endeared himself to all whose good fortune it was to meet him; and to the American schoolmasters whom he has enthused by his writings, his personality added inspiration. He gave several scholarly addresses, but these were in French. M. Benjamin Buisson, who was with us at New Orleans in 1885, was cordially received by those who met him there, and by those who learned to know his brother Mons. F. Buisson (the present minister of primary education in France) at the Philadelphia Exposition in '76. Mons. Buisson uses the English language beautifully, and the addresses which he gave at Chicago were well received. M. Eugéne Martin, director of the superior primary schools at Hirson, is one of the younger schoolmen of France; but he promises to take high rank. He is markedly democratic. At the conclusion of the Chicago congresses he came to California for a brief visit. Mlle. Marie Dugard, professor of Letters in the Lycèe Molaire, Paris, delighted every one who met her or heard her speak. Her paper on the relation of art studies to secondary schools was one of the cleverest read at Chicago. She is both brilliant and modest. Mme. Surrier, of Havre, Haller, of Nancy, Chevrillon, of Lille, and Jules Steeg, whose intelligent interest in the Musèe Pédagogique has acquainted him with educators generally, were also members of the French delegation. Taken altogether it was a strong company of educators, whose excellent papers and charming personal qualities deeply impressed the schoolmen and women of the new world.

The General Educational Display at the Fair.

EMILY E. CLARK, LOS ANGELES HIGH SCHOOL.

A school exhibit really does not exhibit; for the living, thinking subjects are themselves absent. The really helpful display gives clearly and truthfully the teacher's method and aim, and the pupil's own faulty work; for they bring the actual school room closest. Still, even a glance at the vast educational exhibit at the World's Fair must bring one into warmer sympathy with the great world of teachers and taught, and a thorough study of it would give a clear idea of the way in which our American youth is being trained, and show much also of European methods.

One could not but be impressed by the attention given everywhere

to manual training. It seems established beyond question that our boys and girls are to learn wood-carving and clay-modelling, cooking and sewing, as well as reading and arithmetic. And one realizes in the Liberal Arts building, what we all knew doubtless, that in this we are not making a new and rash departure, but are following enlightened French methods, and the conservative level-headed Germans. It is to be hoped, however, that we may learn from their careful, systematic planning, not to take what we do not need, or are not ready for, and above all not to undertake more than we can thoroughly do.

Everywhere, north, east, south and west, beautiful drawings catch the attention, and hold it too, oftentimes. In another quarter of a century the grade of artistic appreciation should be much raised in this country, if there is no other good result of all this training of hand and eye. Many photographs of school buildings are displayed; the "little red school-house" has expanded to palatial dimensions, and compares more than favorably with similar structures in Europe.

There is sometimes an excess of ornamental work; illustrated note-books and prettily decorated collections of "gems" from Shakespere, or "thoughts" from Tennyson, appear in place of thorough English study, while the work in science consists of collections of specimens, and nothing more. All this is in marked contrast to the English and German exhibits, where there is substance and no frippery.

The West is making amazing strides educationally. One finds the best things where one least expects them, and as often west of the Mississippi as east. But compared with Europe, or even Canada, a spirit of unrest pervades all parts of the United States. In Europe there is a sense of the fixed, of the "having already attained," which, however restful, may be less promising than our experimental stage. Arkansas expresses the feeling in the motto over her school display: "If Arkansas fails to-day, she is working for the morrow,"—a noble sentiment if sincere.

In Cleveland the schools are abundantly supplied with the very best of supplementary reading. As a result, in the High School the pupils may be led to the very fountain head of literature. The school authorities there are unwilling to grant leaves of absence requested, for many reasons, but encourage their teachers to go abroad for travel or study, and give them the preference on their return. Such a course might well be imitated in some places in California.

Ann Arbor High School shows the college influence strongly. They have dropped the numerical method of recording scholarship, and in general the school is governed in a truly university spirit.

One of the significant features of the Fair is the large, and as the guide-books say, magnificent Catholic school exhibit. It is evident that they have used great pains to make their display complete and attractive, and to demonstrate that a public school education is not a necessary equipment for practical life and citizenship. Nuns were frequently seen in all parts of the school exhibit. In a booth devoted to one of the Catholic colleges, I heard a gentleman say, speaking of the parochial schools, "And they do good work. Here the public schools have their fine buildings and their fine teachers and their fine apparatus, but—" The rest was lost to my ears.

The exhibit is indeed excellent as to the languages, rhetoric, mathematics and handwork. It is not strong in practical science, however, and one might search in vain for any spark of originality displayed by the scholars. Their note-books are filled with set questions and memoriter answers. Their essays are the most unendurable didactic preachings about virtue and duty, which no mortal boy would express in sincerity even if he felt them. One is always sensible of the weight of authority burdening and binding the child mind. Yet it may be that a little more Roman authority would mix wholesomely with the independence of our young America.

A Study of Shells.

BY C. M. DRAKE.

I.—COLLECTING.

"Next to the comfort of being smart," said my saucy nephew to me, "is having other people think you are smart. I am going to study shells." "Because you think so few people know anything about shells that if you can rattle off a few scientific names, they will think you know a great deal," said I in an inquiring tone.

"You have hit it, most wise uncle. That is one reason. But is it a wonder that I want to study shells, when you have so many beautiful ones here at Long Beach? I must have found twenty kinds on my first trip to the beach. But I do not know the name of a single one."

"If you are really going to study shells," I said, "the first thing to do is to get a collection. This collection will be your materials for study. As it will be low tide about one o'clock to-day, we will take the cars for San Pedro, as there the number of shells we can find will be greater, for they have both mud and rocks." "And I suppose some kinds of shells live in the mud, and some in the rocks." "It is a figure of speech to say a shell lives anywhere; but you can find shells in sand, in mud, under rocks, on rocks or wood, in the rocks or on the top of the ground. Each kind seems to have its range, and this range is often so narrow that you may go twenty feet to the left or right, and you can not find one of them."

"I suppose you find some of them up the trees," said my nephew, jokingly. "Yes, there are some species that climb trees," said I, "but we will not look for them to-day."

When we reached San Pedro, we went out on the breakwater towards Dead-man's Island. It was after eleven, and the tide was already quite low, leaving a wide strip of the bare bed of the bay. Hundreds of the most beautiful scallops (*Pecten equisulcatus*) were lying in the shallow water and on the sand. The first one my nephew picked up gave two or three such vicious snaps of its shell, that Ned dropped it in dismay. "Keep your fingers out of its mouth, for it bites hard, Ned," said I. "Do see that fellow travel!" said Ned, as Mr. Pecten took a leap from his resting place, and started through the water by holding his shell at an angle of 45 degrees and rapidly opening and closing the shell. "Yes, I have seen them roll like a wheel," I replied. "Suppose we fill one of our pails with these cockles (*Chione simillima*) that are partly buried in the sand. You will find three species of them here, and very good eating they all are, too."

"What is this beautiful round shell, that is more than filled with this slimy animal?" inquired Ned.

"That is a Bubble-shell (*Bulla nebulosa*)," I replied. "You can find hundreds of them feeding in that grassy bend of the bay. But notice these little lines in the sand, as though a boy had been making marks with a small stick. Put your fingers a half-inch down under the bunchy end of the line, and you will find a lovely little *Olivella bœtica*." "I have him," said Ned, "and here is another and another. Look, here is a bigger fellow, just like a little olive in shape and color." "That is *Olivella biplicata*, and there are places on this coast where you can dig them up by the bushel. But let us go on to the rocks of the island. The tide is quite low, but you must expect to

get wet." We took off our outer clothes, keeping on a pair of leaky old boots, and a bathing suit, and boldly waded into the still pools left by the out-going tide. Ned was fussy about his hands, so he kept on one stout leather glove to protect his hand from the various rough things he might take hold of.

"Just look at those beauties!" said Ned admiringly, as we carefully turned over a huge, flat stone. (If the stones are not turned over quite gently, many of the little animals will drop off, they are so easily startled. Others, however, will cling tightly to their home.) On the stone we had turned over, were several Sea Urchins, a half-dozen Star-fish, some Chitons, a few Turban shells, and two lovely young Cowries not more than a quarter of an inch long.

Other stones were covered with the rough Chama, the Oyster, and an occasional *Hinnites gigantea*, which is a curious sort of Pecten, with one valve cemented to the rock, in its later life. But it is not so fast as the Oyster (*Ostrea expansa*) which we found were almost inseparable from the rocks, so we had to content ourselves with the upper valve only. "Oysters on the half-shell," said Ned, who likes them raw.

Where the water still surged against the rocks, we found several species of Muscles, a few Abalones and about fifty of the bright-red Strawberry Snail which were clinging to the waving sea-weeds. It was not easy to tear the byssus of the Muscles from the rocks, but the Haliotis gave up when we punched him sharply through his feeding holes. The smaller ones, and the numberless Limpets, we took from the rocks with our broad-bladed putty knives. We always carry an old knife to the beach. We had to get out some of our rock-dwellers, with a hammer and a cold-chisel. But Ned thought the most curious thing of all was when I dropped some salt down the hole at the bottom of which the Razor-shell lives, and when it came up to spit the salt out, I gently lifted it out of its hole. "It is something like putting salt on a bird's tail to catch it," said Ned.

As we returned on the sandy beach, we saw thousands of the little *Donax Californicus*, which the Long Beachers use for soup. Their shells are of all colors from pure white to deep brown, and very handsome color suites can be collected with small trouble. The same may be said of the Heterodonax, the Sparrow's Eggs (*Liocardium substriatum*) and many other shells. We found buckets full of the last, near the mouth of the river, an inch deep under the sand. As we were scooping them out with our fingers, we brought out a dozen or

more of the silvery *Lyonsia Californica*, which I suspect of feeding upon eggs for dinner.

In a side slough, among a bed of Bullas, we found the fresh empty valves of the delicate Macomas, the reddish-brown Sanguinolaria, the pea-pod-like Solecurtus and several others which had fallen victims to the appetites of others stronger than they.

Food and safety decide where a shell shall be. For example, we got many of our Crepidulas, or Slipper-shells, from the backs of the *Conus Californicus*, a queer place to wear slippers; though Ned said it reminded him of his childhood days. These Slippers are the same color as the Cones, they travel on a free pass, and the enemy who eats the Cone, may not see that the Slipper is another animal from the one he is after.

I have made no mention of the easily gathered Littorines which lie in plain sight, even at fairly high tide. Yet they are quite handsome, if they can be gathered by the quart. A rare shell is always the prettier, you know.

In a pile of drift shells, we found a number of Dentaliums, or tooth shells, those curious, spine-like shells which the Indians used to make into a sort of wampum. There were two species, one round and the other six-sided. We afterwards found many fossil ones, above the house on Signal Hill. There are hundreds of places in California where fossil shells can be dug out.

In the mud we saw many live Sand Dollars, the humble cousins of the Sea Urchins we had gathered from the rocks. This shell, if so I may call it, is very easy to petrify. Though so soft that it can be crushed very easily by the fingers, I have seen petrifactions in the bottom of canyons, where the water had worn away the hard rock all around this fossil, and left it on the summit of a little rock-pillar.

The deep sea shells are found after a hard storm. The winter is better than the summer season for gathering shells. Sometimes the ocean current shifts, and a new lot of shells comes in by dozens. Once I found a wagon-load of the Top-shells thrown up on the beach where I had never before seen one. This shell has a very nice door or operculum, as it is called. You should always save the operculums of your univalves. They help to make the univalve a sort of bivalve, and you will find some bivalves with a third shell near the hinge.

There are many shells of which you will find only the upper valve. The fine yellow Ghost-shell (*Anomia lampe*) is one of these.

Ned says they are called Ghosts, because you haven't the ghost of a chance to find the whole shell, but you must not believe him.

Always try to get live shells. By live shells, we mean those that have the living animal in them, or ones that have been alive within a few days. The live shells are glossier, the colors are fresh, and the waves have not worn them so much. Do not think they are live, because you see them walking around over the rocks. Those shells are haunted. In them walks not the murdered one, but the *Crab-ed* murderer, who has either killed the original owner of the house, or has made himself an accessory to the crime by walking off with the house after some one else had done the killing.

Some huge, uprooted bunches of kelp were mines of shell-wealth to us; for in their roots we discovered hundreds of microscopic shells, that we had not found before. On one bunch of kelp, there hung fifty or more of the dainty *Pecten monotimeras*, which breaks at a touch, almost. Among the roots we found shells not so large as the head of a pin, but perfectly formed. These we put into small vials of water, as we gathered them. A number of Serpent Stars were there also, while near by we found some fine specimens of Sponge. Two Waldheimias, those curious brachiopods, were on the roots, while dead Barnacles and twisted Serpulorbis were tangled in the sea-weed.

Before the week was gone, we had collected more than one hundred species of shells, and then the tides were no longer good. So we set to work to clean our shells and to find out their names, and whether they were proper members of good shell society.

(*To be continued.*)

A Foreigner's Impressions.

Mons. Gabriel Compayrè, the well-known French educator whose works are so widely read in America, was president of the educational delegation from France to the International Congresses held recently in Chicago. Upon leaving the United States he gave his "impressions" to the *Educational Review*, and among other things, said:

"This I should say is one of those general qualities which I have had the pleasure to notice in the American teachers whom I have met: they express themselves with an extraordinary facility, with a remarkable abundance of words. In France it is not rare to encounter distinguished men, writers or renowned savants, whose elocution is

painful through timidity or some other cause.. In America it is not so. You have there either the gift or the habit of speech. Eloquence is natural, or is due to the manner of education or the constant opportunities for exercise in public discourse. I particularly remarked this aptitude to express strongly and vividly one's thought in the discussions which followed the reading of papers prepared at leisure by one or another member of the congress. Formerly in meetings of this kind, when the speaker had finished reading his paper, one was content to applaud or pass on to another reading. At the Chicago congresses, happily, the time was spent in a different way. Thus at a special meeting concerning the psychology of the child, presided over with great ability by Dr. G. Stanley Hall, or one in which Professor Earl Barnes, of Leland Stanford University, read an interesting paper entitled "A Study of Children's Theology," speakers followed in rapid succession, taking up the subject to express their objections or to make known their personal observations, and it was necessary for the president to terminate a discussion that seemed endless. I noticed the same in another congress, in the department of Educational Publications, where I had the pleasure of meeting the venerable Henry Barnard, the editor of the *American Journal of Education*, and in which I had myself to attempt a paper upon the educational journals of France. Several of my auditors engaged in a long discussion, among others President James MacAllister, of Drexel Institute, in Philadelphia; Mr. C. C. Rounds, and Mr. Will S. Monroe; and all spoke fluently, showing a rare ability in treating the question at issue and also a sympathy for France which touched me deeply."

Harmful, Helpless, Helpful.

The educational exhibit, in the nature of the case, was radically unlike any other in Jackson Park. The mines showed what they possessed, the manufacturer showed what he could make, the electrician what he had done, but the schoolmaster could only attempt to show how he was doing it. This was frequently overlooked.

Some teachers tried to show products. There are those who seem to think that teaching school is the getting of something done, and that children are sent to school to do for the teacher the things that she must have done,—problems solved, maps drawn, books read, etc. Modern methods frequently intensify the wrong rather than help the

right. The molding board and clay modeling are but added means of wrecking a school in the hands of a teacher who thinks the children are sent to her in order that she may have certain things made. Manual training, sewing, and cooking may be even worse. The child's progress and increase of power is the product, and this is not on exhibition. The school that shows anything as the product of the school and magnifies such an idea is all wrong, and has a harmful influence.

Next in line is the work that simply shows what a school is doing without knowing or caring why it does it in that way. It is a purposeless plan. It has all the characteristics of a system, may be attractive for the perfection of the plan, but is meaningless, profitless. It may not be harmful, but the most that can be said in praise is that it is harmless.

The end aimed at in an educational exhibit should be to inspire better work by showing what is well done, how it is done, and why. An educational exhibit is not a show, is not simply an exhibit of what is done, is not simply an exhibit of how it is done. It may be all this, but the purpose is to inspire the best work, and instruct in the way to reach the ideal unto which they are inspired. There is all too little of this at Jackson Park. Some of the work is inspiring, more is instructive, much is merely harmless, some is positively harmful. Schoolmen as a whole need to learn how to exhibit.—A. E. WINSHIP, in *N. E. Journal of Education.*

To-Two-Too.

BY C. M. WOODWARD.

The question at issue
  Which divided us two
Was, how to spell rightly
  The little word *too*.
So I sent to two scholars
  To learn what to do,
And, strange the agreement!
  She sent to two, too.

METHODS AND AIDS.

Proposal for the Study of Local History.

There has been much said of late years about the desirability of making the study of history more real by basing it, as the study of geography has often been based, upon the study of immediate locality, and then letting this study link itself by its present and well-known units, to the larger world, absent and unknown.

Whether this is to be the final approach to the study of history or not, is certainly an open question, but it is hardly an open question whether such a local study cannot be introduced to advantage somewhere in the course, as it will throw the greatest light on the sources of history in general, awake a historical spirit in the student, and give some insight into the methods of historical study. With these things in mind, we have formed this year at the University, a seminary for the study of the history of the Pacific Slope, a part of whose work is to develop the study of local history, as far as possible. The seminary will be very glad to enter into correspondence with any school or club, or individual worker, who would like to join in this part of its work. The seminary has prepared the following preliminary lists of questions, which may serve as a beginning. In case a class or club take up the work, the questions can be given out to individual members as time and opportunity suit, and the answers collected and collated, will form a sound basis for a local history of some great value; the results should be permanently preserved and the seminary will undertake to give them permanence in the form of seminary papers, unless the school or club wishes to perform the work itself. In this case the seminary will gladly give any assistance in its power in the way of suggestion as to method or form. In the former case, we will send copies of the seminary work to the school, club or individual sending up the material for it; in the latter case, we would be very glad to be allowed the privilege of copying the papers of the school or club for the University library, which we have already begun to make a center where can be gathered books, pamphlets, files of newspapers, manuscripts and letters, bearing on the history of the Pacific Slope. We wish to make

the seminary on this subject also a central bureau of information and assistance for solitary workers throughout the Slope.

Please address all communications to Mary Sheldon Barnes, Stanford University, California.

SUGGESTIVE QUESTIONS FOR DEVELOPING THE LOCAL HISTORY OF ANY LOCALITY ON THE PACIFIC COAST.

The answers to the questions will probably group themselves under the following heads:—The sources for the history of the Slope; The territorial development of the slope; Its political, social, religious and intellectual development; means of communication.

QUESTIONS ON SOURCES.

Is there any organized pioneer or historical society in your community; its vicinity, and if so, has it any printed proceedings, any local library or museum in which books, manuscripts, and letters may be preserved? Who is its secretary? What historical records can you find in regard to your own locality, such as state, county, or town records, files of local newspapers, printed or manuscript maps? Are there any old pioneers, Indians, Spaniards or other persons living who may give reliable information as to the past half century? Have any of them written books or articles? Are there any Indian mounds near you, and if so have they been opened, and in this case, what has been found in them? What Indian relics have been found near? Have any poems or stories been written about anything in your vicinity? Write down any story you have ever heard about old times in your locality, which has never been printed. Note if there are any legends common in your vicinity, or some constant rumor, as of a lost treasure or mine, a ghost or a brigand. Give your judgment as to the character of the story, and also what is generally thought as to its being true.

DEVELOPMENT OF TERRITORY AND RESOURCES.

Why was your city, town or village named as it is? Where did the first settlers come from? Why did they come to this particular spot? By what roads did they come, under what leaders and in what conveyances? What was their previous history, as far as you can discover it? What was the first house built? And in what year? The first church? The first school? The first hotel? Private house? Saloon? Shop? Railroad? Get pictures of these as far as possible, sketches or photographs. What was the nearest market town, and how reached? What is the chief industry of your place at present? Is your

place increasing or decreasing in prosperity, and what proof can you give of either state of affairs, and what reason? How did its chief present industries spring up? What favored them? Has your place ever had a "boom"? How was it started? How long did it last? What was the end of it? What connection can you see between the physical geography and the history of your place?

POLITICAL DEVELOPMENT.

What political parties exist among you, and what party is predominant? How would the same question be answered for period of the Civil War? For the early fifties? Is there any satisfaction in the political parties and how does this show itself? Have there ever been vigilance committees in your place? What was the cause of them, how long did they last, how come to an end? What opinions have you heard expressed as to their evil or good effects? What is the chief local officer? How is he chosen? What is your town government supposed to look after? What complaints have you heard made in regard to the management of local affairs? How often does it change? Does the town own water-works, gas-works, street-railroads?

SOCIAL DEVELOPMENT.

Were the first settlers married or unmarried? When did the first family settle in your place? Under what laws, and by what forms were marriage ceremonies performed before 1850? Who is the oldest native-born son or daughter in your county, city, town or village? What were the favorite forms of amusement at the date of your first settlement? What are the favorite forms of amusement now? If there has been a change how did it happen? What clubs or societies for mutual benefit or pleasure exist or have existed in your community? What nationalities are found in your place? Do they mingle together or keep separate in respect to language, manners and customs, amusements, etc? Quarter of residence, etc? Except the Chinese from this statement. What is the feeling on the part of the American part of the community towards any of these foreigners, and what expression of this feeling have you seen or heard? Is there in your vicinity any community peculiar to its religious belief, manner of life, etc., like the Kaweah community? How many came at first, and how many are there now? What expressions of like or dislike have you heard in regard to them, and by whom made? What events have tended to increase or decrease the number of Chinese among you? Into what occupations have they entered? What proof can you give

that their employment has injured the white working man? Have there been any Chinese riots? What caused them? Who led them? How were they put down? What feeling did you hear expressed as to their justice or injustice? Has there been any considerable number of Indians in your locality since 1850? What has become of them? How were they supported and how far were they civilized?

RELIGIOUS AND INTELLECTUAL DEVELOPMENT.

What was the first church built in your place? How many churches are there now? How large a proportion of your people attend church? Which is the popular denomination? When was the first school built? Was it private or public? Is there any prejudice against sending children to either kind of school? Are there any public libraries in your community aside from the school libraries, and if so, when and how founded? Are there any Chautauqua, University Extension clubs or other societies for the promotion of culture? Are they public? What newspapers or magazines are published in your city, county or village? Are they organs of a political party or of a religions sect, or unpartisan? Has any famous man been born in, or lived in your county and for what was he famous? Name the most famous men in your county to-day, and tell for what they are famous.

S. U. C.

Prepositions.

BY LEROY E. ARMSTRONG, SAN JOSE NORMAL SCHOOL.

All teachers recognize the fact that the preposition is usually hard to handle, and that careful teaching of that subject is required to bring about desirable results. Many methods have been devised to aid in the work, and with the hope that some teacher may be benefited by a comparison of methods and devices, this paper is submitted.

When you are ready to begin with prepositions, take a book and place it on your desk, then ask a pupil to give a sentence about the book and the desk. "The book is on the desk." Write the sentence on the board, then change the position of the book, and ask for more sentences. As they give you "The book is near the desk," "The book is above the desk," etc., write the sentences on the board, one under another. Ask the pupils what they notice about those sentences. One will say that they are all alike except one word, another that the meaning is not the same. When they all see that the mean-

ing is different, ask them what makes the difference, and underline the words "on," "near," "above," etc., as the pupils name them. Then ask what those words do. Some one replies, "They show position." "Absolute position, as east or north?" "No; position of the book with reference to the desk." Write the word Position on the board.

Now place James in a corner, and let John walk as the pupils shall direct, while they give sentences concerning what he is doing. "John walks towards James," "John walks from James," "John walks around James," etc., will be given. Write the sentences on the board as before, and question again, developing the fact that these words "toward," "from," "around," etc., show direction of motion. Write Direction on the board.

Take other groups of sentences, writing them on the board, and question as before. Ask a pupil when he came to school; he answers, "I came before eight o'clock." Others give, "I came at eight o'clock," "I came after eight o'clock," etc. In this way you develop the idea of time. Similar questions will give you the idea of place, possession, etc. As you develop each idea write the word on the board. You have Position, Direction, Time, Place, Possession, Likeness, Accompaniment, Agent, etc.

Having examined the words so far, ask some one to make a definition. Wait until you get the logical answer, "These words are used to show position, direction, etc.," down the list. The class object to the definition because it is too long. Do not try to develop the idea of relation until the class see the necessity for a word that shall cover the meaning of all the others. Let them decide that we must have some such word, then proceed.

If you have in school a brother and his sister, ask. "What is true of John and Mary that is not true of John and Jane?" "They are related." Then write on the board the words *John Mary*, underlining them. Ask "How shall I indicate that they are related?" "Connect the two with a line." Draw a curved line from one word to the other, and ask what the line shows. "It shows that they are related," "It shows their relation." Relation is the tie that binds together. Illustrate by speaking of blood relations, business relations, friendly relations, and social relations. Do not pass from this study of relation until they clearly see that it is the tie that binds things together. We have relation with nearly everything around us. "Relation" is a very broad word. "Is it broad enough in its meaning to be the word that we need?" "Is it broad enough to cover all

those words written on the board?" When we said, "The book is on the desk, was there a relation between the book and the desk?" What was it? "A relation of position." Examine other sentences and test the relation in the same way. Ask again for a definition and you should get, "These are words that connect by showing a relation."

We have decided to call this word which connects by showing a relation, a Preposition. "Preposition" comes from the Latin and means that which is placed before. "Before what?" the pupils will say. Show that it has a closer connection with the last of the two connected words than with the first. "Of that person I know nothing." You see by this sentence that wherever it is placed it usually carries the last of the two connected words with it. We see also that it controls the form of the last word when that word is a pronoun, as in, "He spoke to me," "He ran from her." Hence it is named from its position in regard to the last of the connected words. Give a close drill, having the pupils tell what relation each preposition in a sentence shows, and what words are connected.

By such an examination of the subject pupils may be taught to use prepositions understandingly, and the amount of loose expression, both oral and written, may be greatly diminished.

Methods of Econony.

IDA HALL, BEFORE THE CONTRA COSTA INSTITUTE.

When I began to consider the subject assigned me, the wish came to my mind that my case was that of one young lady teacher who said she "had so few grades that it was not necessary to economize."

On the contrary, in my work, as in the work of many others, there are so many pupils and all of the ten grades, that one finds it difficult to find time for everything.

I have tried to consider the subject under four heads: First, Arrangement; second, Omission; third, Self-Reliance; fourth, Mutual Help.

A school-room may occasionally remind one of a disordered book-case, with the books and papers heaped in great confusion upon the shelves, giving the idea of overfullness; when, by a systematic arrangement, everything is in its proper place, order reigns, and there is room for everything.

This systematic arrangement in the school-room we call a pro-

gram. Without a program the school-room would be in much more confusion than the disordered book case; or, if the program is not well arranged and properly adapted to the particular school in which it is to be used, there is also confusion and loss of time.

Each one of us has his own particular system of working. Some systems are better than others. Mine is by no means complete, nor so good as it might be. It is simply a skeleton upon which to hang my day's duties. The time given to each study is very short, five or ten minutes, perhaps, to a recitation. Necessarily, the time varies somewhat, and frequently two, or perhaps three classes may be heard during the same time. This is particularly true of arithmetic; for, while one class is at the black-board, another is reciting.

My six spelling classes occupy but fifteen minutes. The plan I use is one suggested at our institute several years ago. It is the use of the fingers to indicate the grade, and pronouncing a word while showing a finger; thus: The closed hand indicates the fourth grade; the thumb, the fifth; the index finger, the sixth, and so on to the ninth.

Under "Omissions" are placed the technical parts of writing, drawing and music; temporary omissions, however, as each has its own little niche. We already have some omissions which our County Board, in its wisdom, has granted us. But had it the power to omit the whole of the State History, to substitute a better, it would economize, not only our own time, but the time of the pupils. Unnecessary rules are better not taught, but something more important substituted.

With the smaller studies and the greater part of the reviews, comes, to me, the greatest method of economy. It is teaching the pupil to be self-reliant. Teaching him, that after you have once thoroughly presented the subject, your responsibility ends and his begins, and that he *must* attend to his own reviewing, to be prepared at any time for a rigid test upon any subject.

Perhaps I had better explain my situation or you may not understand me. My school consists at present of fifty-two pupils, with the cheering prospect of a few more. Thirty, or more, of them have been less that two years in school. Having so many little ones to teach besides all the remainder of the ten grades, is the reason for the *must* with regard to individual work.

You may not agree with me regarding mutual assistance. I do not mean that one pupil is to do another's work for him. But all, as

far as the sixth grade and frequently to the tenth, are anxious to "play teacher," whether during school hours or in the intermissions. It may be a first or second grade spelling lesson, or perhaps a principle not quite clear. Let another pupil explain it or hear the class, and both are benefited, and some of your time saved. It is not necessary nor desirable for the brightest in the class to do the assisting, as the poorest in the class will study harder if "playing teacher" be the incentive.

My explanation regarding mutual help is not clear, but I find it frequently saves time for me and does not harm the pupils. Besides which it seems to stimulate the pupils, and causes a friendly rivalry, not an undesirable element in a progressive school.

Picture Stories.

MARTINEZ, CAL., October 11, 1893.

MY DEAR MR. FISHER: Enclosed are two stories written by two little girls just ten years old, from a picture placed before them. These stories were written with a lead pencil on note paper, so I told the children to copy them with pen and ink during the writing lesson last Monday. I did not superintend their work, so everything about them is entirely their own work. Yours respectfully,

ANNIE M. SMULLEN.

A VERY SMALL HUNTSMAN.

In this picture I see a little boy, a gun, and some dogs. I see a manger full of hay, too.

The boy has his father's coat on. I think it is his father's coat, because the sleeves reach down to his heels. The little boy has on a cap which fits snugly over his bright, yellow curls. He has beautiful, dark blue eyes. I think he is about four years old. He is standing in a manger full of hay. He has a gun in his hands.

The gun is quite large for such a little boy to have. I don't think the gun is loaded, because the little boy's mother would not let him play with it if it was. The gun has a brown handle and black stem.

Crowded all around the boy are some dogs. One dog has his head on his master's shoulder. Another dog has his fore paws rest-

ing on the manger. I think the dogs love their master very much. They seem to be very close companions.

JEANETTE DOWNER.

THE YOUNG HUNTER.

In the picture I see a little boy standing in a manger on some hay. There are a great number of dogs standing around him.

The boy has on a large dark cap over his beautiful, yellow curls. He has on his father's coat and cap. He has on a short dress up to his knees, with a white apron over it. Over his fat little legs and feet are little blue stockings and blue slippers. I think he is about four years old.

He has a large rifle in his hand; but I do not think it is loaded, because his mother would not let him have a loaded gun.

The dogs are very beautiful. They are brown and white. They have long flapping ears. The dogs have large beautiful eyes. One dog is standing on the ground with his fore paws on the edge of the manger. Another dog has his head on the little boy's shoulder. The rest of the dogs are all looking at him. I guess the little boy is the dog's master. Every one of them seem to love him.

EDITH BAILEY.

A Device for the Study of United States History.

Washington and Jefferson maddened Monroe,
And Jackson vowed *hate* to Pope;
These five pushed back *lonely* Joe,
Granting he'd got a cold hope.

[EXPLANATION.—Initial letters of words are the initials of the Presidents in chronological order; words of two or more syllables represent two terms of service; italics represent those who died in office.—*Glenn County Course of Study.*]

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

Merits and Faults of Teachers.

A NOVEL EXPEDIENT OF SUPERINTENDENT BROWN, OF HUMBOLDT.

(*From "Nerve," October 7th, 1893.*)

Perhaps the most valuable lessons taught in the Teachers' Institute for years were those which were so clearly illustrated in the recent convention of teachers in this city by Superintendent J. B. Brown, in reading his notes of observation at the various schools in the county which he has visited during the last three or four years. In order to make the lesson impersonal, Mr. Brown had numbered the notes to correspond with comments on the methods pursued by different teachers in the public schools, and, as the notes were an aggregation of collections made at different visiting trips, and arranged without order of time or location, no single teacher could feel offended or assume that any criticism had a personal application. In fact, many of the comments are commendatory, and that perhaps constituted the chief value of the collection.

At any rate, a teacher of experience even, whether now engaged in teaching or not, must have recognized while listening to the comments, some of his own faults, or his own merits, while in other cases they must have felt gratification that at least such and such allusion did not demonstrate his particular unfitness. The experience of a trained educator like Mr. Brown, who has for years been engaged in school supervision, and whose faculties of observation have been sharpened by practice, is most valuable under any circumstances; and when such experience is extended over several years' service in looking for merit and demerit in the methods followed by 135 teachers, and has been condensed and summarized to convey to the teachers themselves in the briefest form of suggestion, we believe that the suggestions constitute too thorough and valuable a treatise on school work to lose. For this reason, and because further, the daily papers gave the most meager accounts of the proceedings of the Institute, we have

chosen to reproduce some of the notes and suggestions hoping that their publication will not only serve to preserve them for the use of the teacher, but may awaken a wider interest among parents in subjects pertaining to education.

In reproducing the comments it will be understood that we follow the numbering of Supt. Brown, and that each numbered note represents in the main, all that was specially observed for or against the methods practiced in that school at the time of the visit, or at least the most pronounced faults or excellencies.

No. 1.—"Advanced class in mental arithmetic with book in hand solving questions, silently giving only results.

Desiring to speak to the school regarding the course of study and having so indicated to the teacher, yet had finally to ask the teacher to bring the school to attention. (This experience has occurred only twice in seven years.)

No. 2.—Pupils mount platform when about to read. Practice may have advantages, but consumes time.

Teacher paces back and forth full length of house during recitation. A "habit" that needs correcting.

No. 3.—Discipline improved. Three classes in history. (Query—Why three?)

No. 4.—Pupils form on ground, march in, keeping good time. Remain standing opposite their desks, with hands behind backs. Seated by tap of bell, but keep hands clasped behind till after roll call. Physical culture, hand and foot exercise. Discipline good. All pupils busy.

No. 5.—Monitors take up hats after school has marched in.

No. 6.—Pupils pronounce reader spelling in concert. Discipline good, quiet and orderly.

No. 7.—Mental arithmetic without books. Operations long. (Query—Were they not too long to charge the memory with?)

No. 8.—Teacher reproved boy because he could not use word "bureau" in sentence. Pupil said he did not know what it meant. When asked, said they had none in his home. (Query—Was child not taken beyond his depths?)

No. 9.—Opened with singing. Good discipline. Calisthenics, hand and arm movements. Not vigorous enough.

No. 10.—Teacher called up school and introduced them to Superintendent. All bowed politely.

No. 11.—Boy reading in third reader far beyond his comprehen-

sion. Five children arrive after 10 o'clock. All pupils reading in advance of their place. Lessons too long. Teacher should have familiar talks with pupils on the lesson in advance, preparing them in the meaning of difficult words, phrases, etc. Last teacher left no record of pupils, parentage, etc., as required by law.

No. 12.—Teacher permits pupil to interrupt her, right in the midst of a sentence in order to ask a trivial question.

No. 13.—Teacher talks with pupils on subject of lesson assigned for study. Much attention given to penmanship.

No. 14.—Class in third reader. Subject—"Battle in Heaven," from Milton. Very difficult piece. Evidently the class had neither prepared on the pronunciation nor the matter, hence failed miserably in every direction.

In exercise to illustrate use of words, following are two samples of pupil's work: "Look in the next fierce *scrawl* to see them die." "Look in the next fierce *scorch* to see them die."

No. 15.—Reading exercises all very good. It receives special attention. Lessons not very long. Teacher gives close attention to pronunciation.

No. 16.—School is running under difficulties, being held in one room of dwelling house, the family residing in adjoining room with several children under five years. Yet teacher had fitted up the room in very neat and tasteful manner, having lined it with cheap muslin and adorned with flags, Chinese lanterns, bright flowers growing in cans, the latter being paper-covered. Teacher's desk covered with white oilcloth.

No. 17.—Fine exercises in history. Pupils called to blackboard on which is sketched a map with plan of Gettysburg. With pointer gives Lee's invasion. Another gives Sherman's march to the sea. Others gives Antietam; Battle of Merrimac and Monitor, and John Brown's raid.

No. 18.—School marches in on time, singing. Girls sing "Red, White and Blue" with spirit. Good exercise with two small pupils reading manuscript lesson prepared by teacher on large sheets of manilla paper, with pictures painted in center, and about which were arranged words and sentences relating to picture. Pupils called by "one," "two," and "three," equivalent to "rise," "turn," "march." Dismissed from class same way. March to and from class with arms folded. Reading lesson too long. Mispronounced words were not corrected. Teacher did not correct errors, nor were pupils required to

correct them. Observed that pupils read with more "voice" than usual. (Query—Does not freedom from the usual volley of criticism that follows the reading of a paragraph, beget confidence or courage? Is it not barely possible that fear of correction may suppress the voice that needs encouragement?)

No. 19.—Found on teacher's desk little volume entitled, "Practical Etiquette." Seemed well adapted to school instruction in manners. More visitors names recorded on the register of this school than on that of any other school in the county. Calisthenic exercises lacked vigor and snap, yet teacher counted too fast.

No. 20.—Local geography; direction of roads and houses in neighborhood, pointing out on map of Humboldt county towns, rivers, mountains, etc. Books taken out and returned to desk on command of "one, two, three." Superintendent chilly as he arrived in rain. Girls putting on wraps. No fire. Teacher keeps warm from exercise.

No. 21.—Opened with singing. Boys sing. Good 14-pound paper used for exercise paper. Cheaper would do. Story writing from pictures on chart. "There" is repeated many times.

No. 22.—Pupils string in after recess without any attempt at order, talking and jostling. Geography in first year; Grammar grade too mathematical. One question was: "What is the relation of the circle to the zones?" History a failure in all grades.

No. 23.—Good exercise on outline maps. Very small pupils point out readily the grand divisions of land and water. Teacher read story to be reproduced. Good exercise with reading, class on form of earth. Calisthenics at 2 p. m. Not vigorous enough. Best exercise in physiology I have heard.

No. 24.—Teacher allowed pupils in distant part of the room to interrupt history recitation by asking questions in loud tones. This occurred frequently.

No. 25.—"If I divide 48 marbles among 6 boys, one boy will receive as many marbles as 6 is contained times in 48." (Query—Is this good reasoning?) A large school, but pupils dismissed without system.

No. 26.—Pupils in technical grammar discussing case of pronouns in opposition with objective and attribute complement. Too difficult. Pupils not mature enough to be benefited. Language exercise would be more profitable. Very good work in drawing.

No. 27.—Stove pipe through roof without brick flue; think, however, house insured for more than it is worth. Great noise with slates.

No. 28.—Class multiply 85⅝ by 18. Did it accurately and well, but the multiplication of the fraction was done formally by cancellation. Why should not the ⅝ be taken mentally? In another instance teacher had difficulty in getting boy to cancel properly in multiplying 160 by ½. Why cancel at all? Why talk farther than to say, "½ of 160 is 80?"

No. 29.—Found many parents and visitors in attendance. Literary exercises had been prepared. House tastefully decorated with flowers, flags, etc. Drawings on blackboard had pretty effect. Recitations, reading, etc., distributed over whole school, at least to number of thirty. Some good original papers. Subjects local, relating to the doings of farmers and others in our own county. Examined many of the papers and found the penmanship good. As an exercise in language on a large scale, it was profitable to whole school. Of course the shaping of the exercises, conducting, correcting, directing, etc., entails great labor on teacher. But this very preparation is greatly beneficial to pupils.

No. 30.—Work of pupils in language good, also drawing and penmanship, as shown by their language exercises. Discipline good.

No. 31.—Considerable talk with second reader class upon the subject of reading lesson. Phonic spelling for pronunciation.

No. 32.—Class in history at colonization of Virginia. Book questions by teacher, book answers by pupil. "Who was the benefactress of the settlers?" "She was the dearest daughter of —— ——;" and then came a dead pause. And so it continued through the lesson. What can be done in history?

No. 33.—Pupils marched in, but noisy. A hum in study. Teacher puts lists of hard words of reading lesson (third year) on board and pronounces for class, who follow in concert; a very excellent help, and saves time. With chart class of twelve pupils, teacher went over lesson, picking out and writing hardest words on board so that "beauty" was in the end read with as much facility as "there." Lesson took only five minutes. Hats kept at pupils' desks, some beneath, some on top. (Query—Would it not be good plan in graded schools to arrange to hang hats at side of desk, to save time that is taken for monitors to distribute them? In some schools much time is consumed in assembling and dismissing. Transition period from study to play, and from play to study should be reduced to the minimum. Good exercises in complements of numbers. Teachers should realize the value of this knowledge. *(To be continued.)*

Institutes.

ALAMEDA COUNTY.—The Alameda County Teachers' Institute was in session September 26th to 29th. The corps of lecturers and instructors was as usual a very strong one, and practically the entire program was devoted to their addresses and lectures. Alameda county has probably the ablest body of teachers in the State, and it is somewhat anomalous that the important matters which come before an Institute for discussion, should be relegated entirely to others, while so many successful teachers whose theories have been wrought and tempered in the rich forge of school-room experience participate only in the capacity of listeners.

State Superintendent Anderson, although pressed with the rush of official business demanding his attention, took time to run down from Sacramento to greet the Institute with words of cheer and counsel. President Kellogg gave some of his impressions from the Chicago meetings. Prof. Geo. C. Edwards, of the State University, presented one of the most valuable papers read at the Institute, on "Teaching of Mathematics in the Preparatory Schools." Prof. Elmer E. Brown's lectures on "Teachers' Institutes and the Future of California High Schools" were timely and interesting. Prof. Barnes, of Stanford, presented his novel studies on "Children's Drawings and Children's Poetry." Prof. Gayley, of the State University, delivered an evening lecture on "Reminiscences of a Campaign for Irish Home Rule." Miss Maggie E. Schallenberger on "Observation and Language of the Young," "Believe in the Boy without a But," "Metamorphosis of the Why Child;" Principal James G. Kennedy, of San Francisco, on "Practical Child Study, and Language;" Dr. Thos. D. Wood, of Stanford, on "Teaching of Physical Sciences;" and Prof. Fernando, of Stanford, on "Relation of Science Teaching to other Subjects in the Course," completed the program. One day was spent by the teachers in visiting the two Universities, the San Jose Normal School and the San Francisco schools.

SAN BENITO COUNTY.—The sixteenth annual session of the Teachers' Institute of San Benito county, convened in the High School buildings, Hollister, on Monday, October 9th, and continued in session three days. Superintendent J. A. Thompson presided, with Prof. C. S. Smyth as Vice-President; James Slaven was selected Secretary and Miss Katie Black, assistant Secretary; Prof. Will S. Monroe, of

Stanford University, acted as Conductor, and the fact that the session was a successful one, goes without saying.

The following was the program: "The Mechanical side of Language Teaching," W. S. Monroe; "Primary Penmanship," E. E. Roberts and E. F. Plyler; "Friday Afternoons," Will Acton; "Geography and Map Drawing," W. S. Monroe; "Physiology," W. J. Dougherty; "History," Miss Frances Brotherton and H. G. Bacon; "Mental Arithmetic," John Garner and Miss Mary Patterson; "Experience in School Supervision," Prof. C. S. Smyth; "Literature," W. S. Monroe; "Currency in School," Miss Alice Christenson; "Primary Reading," Miss Flora Conover; "Reading," Miss Ida Green; "Drawing," Miss Dora Fitz Maurice; "Grammar," C. A. Menefee; "School Devices," W. J. Cagney; "Lessons of the World's Educational Exhibit," W. S. Monroe; "Spelling," Manuel Hubler; "English in the Grammar Grades," W. S. Monroe; "Music," Miss Madeline Eschenberg; "Arithmetic," Mrs. Clara Killey; "Word Analysis," Miss Louise McCarthy; "Our Schools," J. N. Thompson.

Every teacher in the county was present at every session, with a single exception, and that was occasioned by sickness, and the greatest interest was manifested. After the discussion of "Primary Reading," the following resolution was adopted:

Resolved: That as the State text-books in reading are to be revised, we, the teachers of San Benito county, in Institute assembled, would respectfully request the State Board of Education to consider the matter of having the first twenty lessons in the first book to be placed in the hands of pupils, to be printed entirely in script; and also that script lessons be more frequently interspersed in the first and second books of the new series.

On Monday evening, Well's Opera House was well filled by an appreciative audience, to listen to W. S. Monroe's lecture on "Hours With my Friends," a splendid discourse on the best books and authors.

The schools of this county are all in excellent condition, both teachers and pupils are doing splendid work. A county High School has been organized, and is under the able management of C. S. Smyth, formerly of San Rafael, and Henry W. Stuart, of San Leandro, a graduate of the State University. The school opened on August 28th, with thirty-eight pupils. W. A.

MONTEREY COUNTY.—The annual meeting of the Teachers' Institute of Monterey county assembled in the Presbyterian church,

Monterey, Sept. 25th, with 127 teachers present. E. E. Brown, Professor of Pedagogics in the State University, delivered instructive and entertaining lectures on "The World's Fair and Education," and "The Relation of Studies." Prof. Will S. Monroe, as Conductor, in his pleasant and effective manner, gave the teachers many practical ideas on "The Child We Teach," "The Teacher's Library," "Geography and Map-making," "United States History" and other educational topics; President Jordan lectured on "The Spanish Missions in California," and "Value of Higher Education;" Dr. Wood, of Stanford, instructed the teachers on "Physical Training" and other kindred subjects; Supt. Chipman, of Santa Clara county, gave a number of well-timed and instructive talks on "The Duties of Teachers to the Children, the Parents and the Trustees," and also on "The Necessity for a Closer Study of the School Law;" Rev. J. C. Simmons delivered a lecture on "Old Field Schools and Old Field Schoolmasters;" Supt. Wood's annual address was replete with words of advice and cheer. The following teachers of the county took a prominent part in the programme: J. B. Hickman, A. C. Barker, J. B. Bennett, G. W. McIntyre, Duncan Stirling, G. W. Gretter, Miss Rickard, Miss R. T. Green, Miss Murray.

SAN LUIS OBISPO COUNTY.—The annual meeting of the San Luis Obispo County Teachers' Institute, held during the first week in October, was in all the essentials by far the most satisfactory and successful Institute ever held in the county. Supt. Armstrong in his resumé of the sessions says: "The talks of Prof. Monroe upon all the topics presented were pleasing, practical and intelligently suggestive, and especially helpful and inspiring were his remarks upon "Supplemental Books," "Science as an Aid to Language," and "Reading." We hope that upon the first named topic every teacher copied and took home with her the list given, and will do her utmost to obtain the books for the use of classes under her charge. In the matter of library expenditures the law of 1893 invests the superintendent with more authority than is desired by the properly constructed public officer, and more, perhaps, than is safe to entrust to any other kind, but if the teachers will say to the Trustees "The library needs these books, we can do better and more efficient work with them; the superintendent is agreed, and we ask your permission to purchase them," the problem will in most cases be solved, and the aids will be forthcoming. The papers read by the teachers of the county, were highly

creditable to them as teachers, and the few who participated in discussions of topics introduced by the conductor showed such an acquaintance with the subjects considered as left no cause to regret their having been designated for the work. The social features were a pronounced success, and the resolutions of thanks to those who had contributed and labored to provide them for the teachers, were just and proper. If the people of Paso Robles next year equal those of San Luis Obispo in this regard, the teachers will certainly have no cause to complain of their reception and treatment. The absentees were confined to those who were detained by sickness and other causes unavoidable, and though two or three there were who evidently mistook the object of the meeting and made it the occasion of a visit to the dentist, and the dressmaker, and the milliner, their number was so small as to justify the hope that they will by next year see the error of their ways.

Many worthy and intelligent patrons of our schools deem the Institute a thing of no value and a useless expense. We think we know better, but to justify our belief and the fact that teachers are fully paid for their time spent in attendance, they should simply attend and participate fully and cordially in the work, to the end that they may continue to grow and may keep step with the educational progress of the times."

NEVADA COUNTY.—The Institute of Nevada county teachers convened at Truckee, October 3rd and adjourned October 5th. One novel feature of the Institute was the place where it was held. This was the first time in the history of the county that it was held outside of the towns of Nevada City and Grass Valley. To many of the teachers this was their first visit to the eastern side of the summit of the Sierras, and the excursions to Lakes Donner and Tahoe, provided by the open-hearted, hospitable people of Truckee, will long be remembered. Prof. Wilson, of the Chico Normal; Principal Hamilton Wallace, of Grass Valley schools; Miss M. E. Schallenberger, of Stanford's; Madam Donna Beaumonte, of San Francisco, and Mrs. Maud Peaslee, an ex-teacher of Nevada county, were the instructors secured for the Institute by Supt. Rogers. Miss M. E. Schallenberger's excellent methods in primary teaching, especially that of Reading, were interesting and instructive to all. On account of a wreck on the road, the teachers returning did not reach Grass Valley until twelve o'clock Saturday night, and some of them had to do some tall walking to reach their schools by Monday morning.—JAS. E. MCGUIRE, Sec'y.

SANTA BARBARA COUNTY.—The program for the four days' session of the Santa Barbara County Institute, October 17th to 20th, was unusually good. State Supt. Anderson was present and took a lively interest in the proceedings, participating in the discussions as well as presenting more formal remarks on interesting educational themes. President Keyes, of Throop Polytechnic Institute, addressed the Institute on "Purposes of the Institute," "The Study of Arithmetic," "Language in Primary Grades," and "Needed Reform in Our Public Schools;" Miss A. I. Hails brought out some instructive points and practical suggestions on the "Beginnings in Arithmetic." The subject of "English in the Grammar Grades" was well and thoughtfully treated by H. N. Caldwell; Principal Webb read an able paper on "Reading in the Upper Grades;" Miss S. A. Hollis on "The Cooking School;" A. S. Balaam on "Corporal Punishment;" and Miss Edna Rich on "Sloyd Work;" Prof. Dodge instructed the teachers on the subject of "Weights and Measures;" Prof. Denton on "The Relation of the High School to the State University" and Prof. Wilson on "Latin in the Public School." Supt. Black, of Ventura, was present as a visitor, also Supt. Kirk, of Minnesota.

LASSEN COUNTY.—In session at Susanville from 1:30, Tuesday, Sept. 26, until noon of the following Friday. Superintendent, Mrs. M. P. Woodin, presiding, P. M. Fisher, Conductor. Excellent papers were read by Messrs. Vickers, Dixon, Pryor and Chase, and Mesdames Dunham, Lysinger, Hurley and Smith.

While the teachers showed commendable interest, the Institute was unfortunate in the fact that the County Fair was held the same week. Races during the day, and the pavilion with its very creditable exhibit of products at night, together with the labor of caring for the crowd, engrossed the attendance of the general public so that outside attendance, so desirable, suffered.

CONTRA COSTA COUNTY.—Martinez, Oct. 4-6. This was truly a *Teachers'* Institute. Supt. Kirkwood had arranged so that each of the six half day sessions was placed in charge of a prominent teacher. These leaders were made responsible for the success of their share of the program, and the result was that the Institute resembled a tournament in which all participated and each did his best. Out of the seventy-five teachers on the roll only one failed to take active part, and she was a substitute teacher. No individual mention need be made, for the work was uniformly excellent. Many of the teachers made

oral addresses, and the composure of the speakers and the concise character of the speeches (and papers also) were refreshing. Condensation seemed to be the watchword. Against a gallant defense made by the veteran teacher, A. J. Young, the proposition of pensioning teachers was voted down. A resolution favoring free text-books, supported by Messrs. Young, Swain, Sickel and Thurber, prevailed. The evenings were devoted to attendance at entertainments held for the benefit of the Free Reading Room of the town. Prof. Foster, representing the only high school in the county, was an earnest and sympathetic participant. P. M. Fisher delivered four addresses. In the system of grading and cataloguing the pupils, in intelligent zeal and unity of purpose, little Contra Costa stands well at the front.

SANTA CRUZ COUNTY.—Santa Cruz, Monday, Oct. 9, to Friday noon, Oct. 13. Instructors, Elmer E. Brown, of the State University, Edward H. Griggs, of Stanford, and P. M. Fisher. Superintendent Linscott made a capital opening address, full of fire and vigor. He evidently knows his people and his teachers and is at home on the platform. Two forenoons were devoted to the discussion of methods, the teachers being divided into three sections, primary, intermediate and grammar; the remainder of the week they met in general session. Monday evening the teachers of Santa Cruz city, under the leadership of D. C. Clarke, entertained the visiting teachers delightfully.

On Tuesday afternoon Prof. Griggs spoke on "The Ethics of Literature," and in the evening gave a masterly lecture, elegant in diction, on "The Ethics of Hamlet."

Prof. Brown spoke on Thursday afternoon on "The Study of Systematic Pedagogy." Very much to the regret of the teachers he was called away because of serious illness in his family. Acting upon his suggestion the teachers resolved to read some one book, on a line to be determined by a committee, during the coming year, and devote one day of the next Institute to its discussion. In his absence, Mr. Fisher delivered the evening lecture. A feature of the Institute was "Kindergarten work, with Class Exercises," conducted by Miss Genevra Sisson. As the kindergarten was this year for the first time made part of the public school system in Santa Cruz, keen interest was aroused and the general opinion as expressed was favorable to the plan.

Some very strong papers were read by teachers, several of which will appear in future numbers of the JOURNAL. The audiences both

day and evening were large. Full reports of the proceedings were given by the newspapers, notably, the *Santa Cruz Surf*, which through its enterprising and appreciative correspondent, Mrs. Raymond, devoted daily from two to four columns to the Institute. It was voted that every teacher should take an active part in the work of the Santa Cruz County Improvement Society, and a committee was appointed with power to act, in the matter of an exhibit at the Midwinter Fair. The session was a pronounced success.

NAPA.—Napa, 18-20. The JOURNAL has no program of this Institute. Prof. Dickinson, who participated one day, reports the presence of Prof. and Mrs. Barnes, and all indications that under the management of Supt. Anna Dixon the session would be not only delightful but effective for good as well.

GLENN COUNTY.—Willows, Oct. 16-20. P. M. Fisher, Conductor. Prof. R. F. Pennell, Principal of the Chico Normal School, spoke on "Geometry in the Grammar Grades" and "Supplemental Reading." Tuesday evening he gave an address on "Educational Reformers, and Some Practical Hints to Teachers of To-day." No little interest was felt in Prof. Pennell, as this was his first appearance at an Institute since his election to Chico. The teachers of the north hope to become better acquainted with him, as he will find in Institute work an opportunity to extend the influence of the Normal. The roll of teachers in Glenn is small but the interest was intense. From Supt. Finch's opening address, full of kindly and wise criticism, to the last half hour of the sessions, this interest never flagged. Mrs. H. L. Wilson, Supt. of Colusa, was present two days. She read a strong paper and was warmly greeted. Prof. John Dickinson gave several practical day talks, and delivered an evening lecture on "A Winter in the West Indies" to a delighted audience. On the first evening, addresses of welcome were delivered by citizens of Willows. The chief address was by Hon. R. A. Long, on "Education in the Direction of the Special Aptitude." It was well worthy of the occasion, and called forth no few enconiums. Many citizens attended the day sessions, and scores were turned away from the evening sessions for want of room. The Institute seemed to be appreciated by all, and the editor of the JOURNAL is under obligations for hospitality without stint.

NORMAL DEPARTMENT.

Chico Normal School.

SOME CHANGES IN THE COURSE OF STUDY.

Mr. Alfred Fouillee says, "We moderns have too few ideas on too many topics. The thinking subject is stormed by objects too numerous to admit of attack in detail. The ancients had the habit of concentration, systemization and synthesis; we are parceled out and scattered broadcast by our analysis."

It should be well understood that strength comes from *unification* of knowledge rather than from knowledge in itself. "Know something well" has its wisdom in the fact that in such knowing there is "Concentration, systemization and synthesis."

Our complex civilization has brought into the course of study the great number of objects of study, and we have yet to save the thinking subject from being "parceled out" by adopting some form of unification.

In our Normal School this has begun by making some of the subjects elective and extending the time of study of many of them to one year in each. Physiology, Physical Geography, History of Education, Psychology, U. S. History and Civil Government are obligatory and pursued one year each.

Biology, Physics and Chemistry are elective and pursued one year each. Chemistry or Physics must be elected by the Seniors, and Biology or Physics by the middle classes. In the senior year Biology particularizes in Zoology or Botany.

These are fundamental and therefore important changes, which it is expected will, in a degree at least, "check the intellectual anarchy which threatens to divide us into sections."

The introduction of the study of Biology, while it brings out the idea of classification from a fundamental point of view, emphasizes what is of prime importance in the mind of the teacher, namely the "procession of causes,—the combination of factors *in* the *product*, and

not an *ab extra* determination of the product. It will serve as an inception of the idea of "*self-activity*" by which the "nature of education is determined." Thus, while it brings into prominence the notion of "conditions of existence" in living organisms, it also serves as an excellent forerunner of the year's work in Psychology.

WASHINGTON WILSON.

San Jose Normal School.

EVA V. JOSEPH, - - - - - - - - - - - Editor-in-Chief
MAY ARBOGAST, - - - - - - - - - - - Associate Editor
LEROY ARMSTRONG, - - - - - - - - - - Business Manager

Friday, January 20th, the Senior A class made its semi-annual visit to Mount Hamilton and the Lick Observatory. Professor Holden welcomed us very pleasantly, and after we had registered conducted us to the great observatory where the spectroscope was explained. It had been intended for us to view the solar spectrum, but the sun was so low that we could not well do so, so we were shown the hydrogen spectrum instead. Professor Campbell then very kindly allowed us to examine the mechanism of the great telescope. Leaving this we looked over the buildings, and, after having the transit explained to us, entered the small observatory. Here, under the direction of Professor Barnard, we looked at Venus, Gamma Andromedæ, a star cluster in Perseus, the nebulæ in Orion, and Jupiter. Returning to the other observatory again, we looked through the great telescope at one of the large craters on the moon. Our party being small, and the evening favorable, we were enabled, through the kindness and courtesy of the professors of the Lick Observatory, to spend one of the most pleasant and profitable visits that it is the privilege of the Seniors to make.

"Popular Astronomy" is the title of a new magazine on our library table, which we earnestly recommend to all who are interested in astronomy, especially teachers. The first number contains two excellent plates of the moon and a map of Jupiter's comet family. Excellent articles by the leading astronomers of America are contributed each month. Professor E. E. Barnard, of the Lick Observatory, and Prof. S. W. Burnham, of Chicago, will each soon begin a series of articles in their respective lines.

The matter in the first number is written in a very clear, simple style, easily comprehended by amateurs, and just this point renders

the magazine, in our opinion, superior to any others we have seen, for the student at large.

The subscription price is $2.50 per year in advance. Issued monthly, except July and August, by William W. Payne and Miss C. R. Willard, Goodsell Observatory of Carleton College, Northfield, Minn. Send for a copy and examine it carefully, and you will be fully repaid.

Miss Susan Calhoun delivered an interesting and profitable lecture on physical education at Normal Hall, Friday, October 13. Especial attention was paid to sitting and walking positions.

ALUMNI NOTES.

Etta Jackson, Dec. '84, was married July 4, 1892, to Julius R. Remmel, Alameda. Taught successfully until married.

Josie Purdy, June, '93, is principal of Franklin school, San Jose. Has three assistants, one of whom is Bertha Hart, class of '92.

Fred Dixon, June, '93, is studying law in San Francisco.

Aurelia Layson, June, '90, is principal of Paradise school, Butte county.

Maud Martin, Jan. '90, is principal of Nordhoff school, Ventura county.

Myra Abbot and Harry McLane were married October 18, 1893. Miss Abbott graduated in '90, and taught successfully until married.

Annie L. Remmel, Dec. '88, is doing superior work in the primary grade of the Encinal school, Alameda.

Blanche Tarr, class of '89, was promoted from the fifth grade to the ninth grade in Santa Maria school, Los Angeles, at the beginning of the spring term.

CORRECTION.—A. H. Washburn, teacher of mathematics, studied in this Normal, 1874–75. Went East and graduated from Boston Polytechnic School, 1882, course of Civil Engineering. Tutor at Stanford University, student in mathematics. Graduated in 1893.

Methods and Devices.

BY CORNELIA WALKER, TEACHER OF PEDAGOGY.

Our work in methods is based upon the study of elementary psychology and the practical study of child-nature. In the middle class, we have special methods in primary geography, number, science, reading and language in connection with the observation of children (both

in the training school and elsewhere) the discussion of educational principles, and pedagogical reading. One of the first topics discussed is:

THE ART OF QUESTIONING.

The ability to question logically is, in a great measure, a natural gift, possessed by some, lacking in others; but this gift can be improved, and even the want of it can to some extent be supplied by thoughtful practice.

SUGGESTIONS TO YOUNG TEACHERS.

During the first year or two of your teaching, in preparing your work, write out at least one series of questions each day, and try to imagine all possible answers, (in other words, put yourself in the place of the pupils and try to see things through their eyes), then rearrange until you have such questions only as are clear, and in what seems to be perfect logical order. When giving these to your class, notice in how many places it becomes necessary to vary your questions or their order and why.

With this experience prepare the next set, and so on. By perseverance here, you will be astonished to find how much you will gain in power to systematize work, hold the attention of pupils and economize their time, while you will be able in a few weeks to extemporize questions while teaching, much more rapidly and more logically.

Following are given sets of questions prepared by members of the middle class, intended to lead children to habits of observation in connection with reading lessons, spelling, composition, etc. "Kill as many birds as possible with one stone."

TEN LOGICAL QUESTIONS.

Subject.—A tallow candle with materials for simple experiments to arouse the interest, curiosity and attention of the pupils.

1. About how long is this candle?
2. What is its shape?
3. Of what is is made?
4. (The teacher cuts notches on one side of the candle a very short distance apart, and bids the children count them. She then lights the candle and proceeds with her questions. At the end of five or ten minutes she tells them to count the notches again.) How many notches have burned?
5. What does the tallow do when the flame makes it hot?
6. When I tip the candle in this way what does the heated tallow do?

7. Look at the drops on this piece of paper; what has happened to them?

8. When I put this clean white paper above the flame what happens to it?

9. Of what use is a candle?

10. Tell all you have learned to-day about the candle? Have you noticed any more about it that you would like to tell? What?

Eight of these questions are intended to cultivate observation. Each question should be fully discussed, but the interest should not be allowed to flag. LOUISE PEAU.

QUESTIONS ON THE PEA.

Each pupil is supposed to be provided with a soaked pea to examine.

1. What have I given you?

2. What is its shape? Color? Size?

3. What do you notice on the skin?

4. Carefully peel off the skin; what do you see in the place that is just beneath the V-shaped mark on the skin? (Explain the *root*).

5. Was the little root attached in any way to the skin?

6. How?

7. Now split the pea carefully. What do you see?

8. Are the root and the little bunch of leaves attached to each other?

9. Which way do the leaves look as if they would grow? The root?

10. Tell me all you have found out about the pea.

ALICE S. HARLOW.

QUESTIONS ON THE BUTTERFLY.

Children: I have here ten butterflies, one for each of you, and I want you to look at them closely, so that you will be ready to answer my questions. You see I had to kill them so that you could look at them without their getting away, but I would not kill them just for fun.

1. Do butterflies walk around on the ground when they want to go somewhere? ("No; they fly.")

2. Their wings do not look like bird's wings, do they? Tell me something peculiar about them. ("They are covered with something that looks like dust.")

3. I wonder if it is dust. Scrape just a little off and tell me

what you think about it. ("It is not dust but something like little tiny feathers.")

4. Look at the spot where you scraped off the feathers and then tell me if you think they have anything to do with the pretty color of the wing. Why? ("Because the spot where I scraped off the feathers is not a pretty color like the rest.")

Here I should show, with a magnifying glass, how the feathers or scales are fastened on in rows.

5. We shall not spend any more time on the wings now. Who has found something he would like to ask about? (I see something long right where its mouth ought to be.)

6. Who knows what it is? Did any of you ever see a butterfly eat? Nobody. Well, I shall not tell you about it. The next time you see a butterfly on a flower watch him and see if you can tell how he eats. (Future observation.)

7. Count the butterfly's legs and tell me how many there are.

8. I wonder if any of you have eyes to see how many parts the legs of a butterfly have.

9. Who will tell me in a nice little story all that we have learned about a butterfly?

LAURA BROTHERTON.

[*To be continued.*]

The cost of an ivory billiard ball is curiously estimated by a Cairo author as follows: In the judgment of honest African travelers, the tusks of dazzling whiteness are answerable for the following: 160 deaths that must be counted as murder or manslaughter; 30 deaths incurred during the journey from the interior to the coast; 10 "deaths by law," and 10 accidents during the elephant hunt. Add to this 15 thefts, any amount of cheating, drunkenness and acts of brutality and cruelty. A medium-sized, faultless tusk yields two or occasionally three billiard balls; and every ball means, it is stated, at least one murder or one great crime.

TIMING THE SPEAKER.—There is said to be a tribe in Central Africa among whom speakers in public debates are required to stand on one leg while speaking, and to speak only as long as they can so stand. Good!

EDITORIAL.

ERRATUM.—In the device for the study of history, page 450, the word "got" should be in italics.

WE acknowledge receipt of neatly printed curriculum, requirements for admission, etc., of the Ventura High School, from P. W. Kauffman, Principal; also, copies of the annual reports of Principal Graham, of Pasadena, Supt. DeBurn, of San Diego, and Public School Manuals from Orange and Glenn counties.

WE present in this number of the JOURNAL views of several of the principal Midwinter Exposition buildings. The work on them is being rushed, and the indications are that all will be in readiness by the time the Fair is to be opened. The Souvenir Volume to be issued by the Educational Publishing Company is meeting with hearty support in the way of subscriptions, and if the plan meets with the approval of teachers from all parts of the State, the publication will be the most complete of the kind yet issued in any State.

NORD, BUTTE CO., CAL., October 16, 1893.

DEAR MR. EDITOR:—There seems to be a contradiction in the compromise of 1850 as given in the following histories: In Barnes' Brief History of the United States, page 193, clause (4) reads thus: "That the slave trade should be prohibited in the District of Columbia." In the State History, page 283, clause (3) reads: "The continuance of slavery in the District of Columbia."

Which is right? Through the columns of the JOURNAL please answer.

Yours respectfully,

E. N. MABREY.

ANSWER.—You seem to have misquoted or to have quoted from an imperfect edition, for an examination of the State History shows that clause 3, page 283, reads: "The abolition of slavery in the District of Columbia."

WILL S. GREEN, the well-known doughty editor of the *Colusa Sun*, grows indignant at what he considers an unjustifiable statement by Prof. Earl Barnes that all little children tell lies. And when editor Green concludes that a wrong has been done, he usually loses no time in cudgeling the wrong-doer. In this case his zeal carries him across the boundary of the elegant in language into the field of the forcible. Now we have long admired Mr. Green, for he is humane, tender-hearted and fearless; and we like Prof. Barnes, because he is original, truth-seeking and thoroughly companionable. These two men would enjoy each other if made acquainted. Editor Green is a stranger to the Prof. and his work, and neither appreciates the spirit nor understands the object in sending out the objectionable (?) circular to teachers. Prof. Barnes wants to collect some data by the assistance of teachers, from which to establish, if possible, a general principle, which in turn may be used by teachers in the instruction and control of the individual pupil. He may think that all young children are prone to state what is not true, and the data collected by teachers may seem to sustain his view, or it may go far to demonstrate the opposite to be true. In any event, the teacher who will set herself to the task of a careful, thorough study of the child is taking a long step, not only in the direction of better instruction, but also towards a more thorough sympathy. For if childhood does not see things clearly and is timid, or is perverse in statement, these may have the relation to each other of cause to effect. If heredity be the trouble and the doctrine of total depravity be accepted, so much the more pity for the child. And in either case the considerate teacher will do what seems best, the helplessness of the child appealing to her.

That the record made by the teacher in thus studying the child, shall stand against him and be used against him, thus working a humiliation and doing him great damage,—it seems that this fear is groundless; for by the use of figures or letters instead of names, parents may feel that identity is lost. We have, however, just a little grave suspicion that this alarm at the prospect of hurting children's feelings (a reaction from the days when they were treated as though they had none) is nowadays carried a little too far, and we let them have their own way, lest they might not grow to that fullness and richness of manhood and womanhood, that is their right and our dream, and then lament that they don't attain it. But, the professor and the editor aside, we are inclined to think that little children are natural; that they express what they desire, what they feel; that

they have an imaginative period later on, when they delight in hearing, and soon learn to tell of, the marvellous—the improbable, *knowing* that it is improbable—untrue, if you please; that before this age of the marvellous, during and after it, they lie, if they lie at all, through fear, or for gain, or because the attitude of parents, the association of their companions lead them to lie.

Let the Professor continue his investigations and let the newspaper editor follow him. It is better so than that each should be oblivious of the other.

A Deserving Case.

We call the attention of County Boards of Education and Boards of Trustees to the action of the Santa Cruz County Teachers' Institute in the case of the veteran teacher, John C. Pelton. If such a thing could be done by the officers of the municipality of San Francisco, Mr. Pelton ought to be paid a debt fairly due him; namely, compensation for the home sacrificed by him to maintain the first "free school" in the infant city. If there is no way in which the Board of Supervisors may officially do this, then school officers throughout the State by concerted action should place this pioneer who came "around the Horn with the school system of a future commonwealth in his brain," securely beyond the buffetings of life—the bitter mortifications of a noble spirit struggling against want. Rendered helpless by an accident, a dozen years were lost when life's harvest was at his command. Rallying from the edge of the grave, he made a supreme effort, displaying exalted heroism—fortune was fairly in his grasp—when the base treachery of a trusted partner threw him into the abyss again. Undaunted, he has gathered in the leaves of a volume what may not be high grade poetry, but it is the cry of an immortal seeking expression in verse out of the blackness of an experience such as seldom falls to the lot of men, certainly rarely to school-men.

Whatever the book may be, and it can by no stretch of the imagination do harm, it stands between him and direful fate. To a spirit that, though broken, is still manly, it seems to offer some equivalent for the help it may bring. The Grand Parlor of the Native Sons has recognized his claims and in strongly worded resolutions has commended him to the good will of members of the Order. Boards of Education have placed his book on the library list. It now remains for a general effort to be made to place a copy in every school library of

the State. This done, Mr. Pelton will be enabled to spend the few remaining years of his life in comfort under his own roof, and friends of education and good men and women generally may take comfort from the assurance thus given, that no one who devotes his life to the public good, will be deserted when to the gathering darkness of age is added the horror of destitution.

The Pacific Coast Teacher.

BY JOHN G. JURY.

[We make room for the following communication, because we believe it to be of interest to readers of the JOURNAL. It illustrates how ambition frets at being "cabined and confined" and how the glorious promise of the morning hours often grows cold and dun as evening draws on.—ED.]

Behold a young man with his eyes upon the clouds and a howling infant industry in his arms. A granite look of mingled perplexity and remorse o'erspreads his countenance. Ever and anon the rigid stare softens itself into a pale, woful smile, the lips slightly part, and he is heard to ask abstractedly for the wings of a dove, and make some irrelevant remark about being at rest. As the days wane slowly his burden increases apace, and the din, likewise. Such in brief might serve to picture the late predicament of either one or the other of the founders of the *Pacific Coast Teacher*. Full of hope, they, two years ago, conceived the idea of publishing a journal that should represent the interests of the more than 2000 alumnæ of the San Jose State Normal School. They were encouraged by fellow graduates and teachers. Obstacles that inevitably meet the adventurer in new paths were met, one by one, and overcome. Subscriptions and enthusiastic letters of encouragement began to come in. The founders of that journal felt and indeed still are convinced that the field, if rightly worked, would prove highly remunerative. Normalites are as a class enthusiastic and progressive, and will generously subscribe for good educational magazines. No reason seemed to exist why the magazine should not extend its influence and become eventually a recognized force in Coast educational life.

After a time rebellious ambitions began to show themselves. Each editor could work in perfect harmony with the other, but I was constantly at war with himself.

"The 'spirit' and the mortal instruments were then in council, and the state of man

Like to a little kingdom, suffered then
The nature of an insurrection."

Each endeavored to obey the Scriptural mandate "See'st thou a man diligent in his business," but was continually admonished by an invisible monitor that his business was not journalism. They did not mind if the promise "for he shall stand before Kings," were cut down to a comfortable standing with the printer. The consequence was, the infant aforesaid was neglected; that is, it did not receive all the care and attention that it deserved. We have sufficiently suggested the reason in our opening lines. The founders, however, by no means had abandoned their aim to make the journal most worthy of the patronage of the best teachers.

If at times they found it easier, as Portia would say, "to tell twenty what were good to be done than be one of the twenty to follow their own teaching," we trust that the fault may be laid at the door of "desperation" rather than "inclination." But we are here not to praise Cæsar nor, happily, to bury him. This is only the rite of adoption. We pass the *Pacific Coast Teacher* to more experienced educators.

It is our sincerest wish that the teachers of California will as enthusiastically receive the journal to which it now goes as the Normal contingent of our educators greeted it during its brief day under our roof.

A New Mother Goose Story.

School Director Reed was visiting one of the Grammar Schools in Oakland, Cal., a few weeks ago and was introduced by the principal to a teacher who had an eighth grade class. The teacher remarked that she had just given the class an odd subject for a short composition, and that if the visitor would be seated a short time, he might hear what some of the pupils had written. The subject was:

Jack Sprat could eat no fat,
His wife could eat no lean,
And 'twixt them both they kept the platter clean.

Naturally these lines brought up something about Mother Goose, and the teacher asked the question, "What did you know about the subject before you commenced writing?" Up went a hand, and a young lady answered, "Mother Goose was a real person and the selection is from her melodies."

The visitor then asked, "What was Mother Goose's name?" and the prompt reply came, "Mrs. Goose." The principal then asked, "Did Mother Goose have any children?" The hand of a miss of about sixteen was raised. "You may answer," said the teacher. The young lady replied, seemingly with perfect confidence that she knew all about the entire Goose family, "No sir, she had no children; but she had *several grandchildren* to whom she related these stories."

For a moment there was perfect quiet, then teacher, principal, visitor and the entire class broke out in a laugh that just made things ring.



NOVEMBER, 1893.

J. W. ANDERSON, - - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - - Deputy Superintendent of Public Instruction

[Because of office business and the calls to attend Teachers' Institutes at this season, State Superintendent Anderson writes that he can furnish no official copy for this number of the JOURNAL. In reply to a request that he should furnish the JOURNAL with some statement relative to the proposed educational exhibit at the Midwinter Fair, the following letter was received. It is published in jnstice to the Superintendent, and to show just what his desire in the matter has been. —ED.]

SACRAMENTO, Oct. 26, 1893.

Editor Pacific Educational Journal.

DEAR SIR:—Relative to the Midwinter Fair, permit me to say that it was my desire to see the schools of the State well represented in a special exhibit of school work, and other matter connected with the schools. To this end I proposed that contributions be solicited for the erection of a building for that purpose. This plan, however,

does not seem to have met with favor. I therefore am impelled to the conclusion that it will depend upon the several counties of the State to make such arrangements for the exhibit as may by them be deemed proper. Whilst I am willing to do all in my power to have an exhibit that will be a credit to the State, I can see nothing that it is possible for me to do. I respectfully refer the matter to the several County Superintendents and their corps of teachers. I would have called a convention of the Superintendents; such action, however, would have entailed quite an expense upon them, for the payment of which no provision has been made. I am abundantly satisfied that had united effort been made, a sufficient sum could have been easily raised to have enabled us to have erected a suitable building and to have made a very respectable exhibit. It is not too late yet to make an effort to this end, were the several Superintendents and teachers of the State willing to undertake it. I fear, however, that nothing will be done and that the matter must be left to the counties individually to make such exhibits as they may deem proper.

Respectfully yours,

J. W. ANDERSON,

Supt. of Public Instruction.

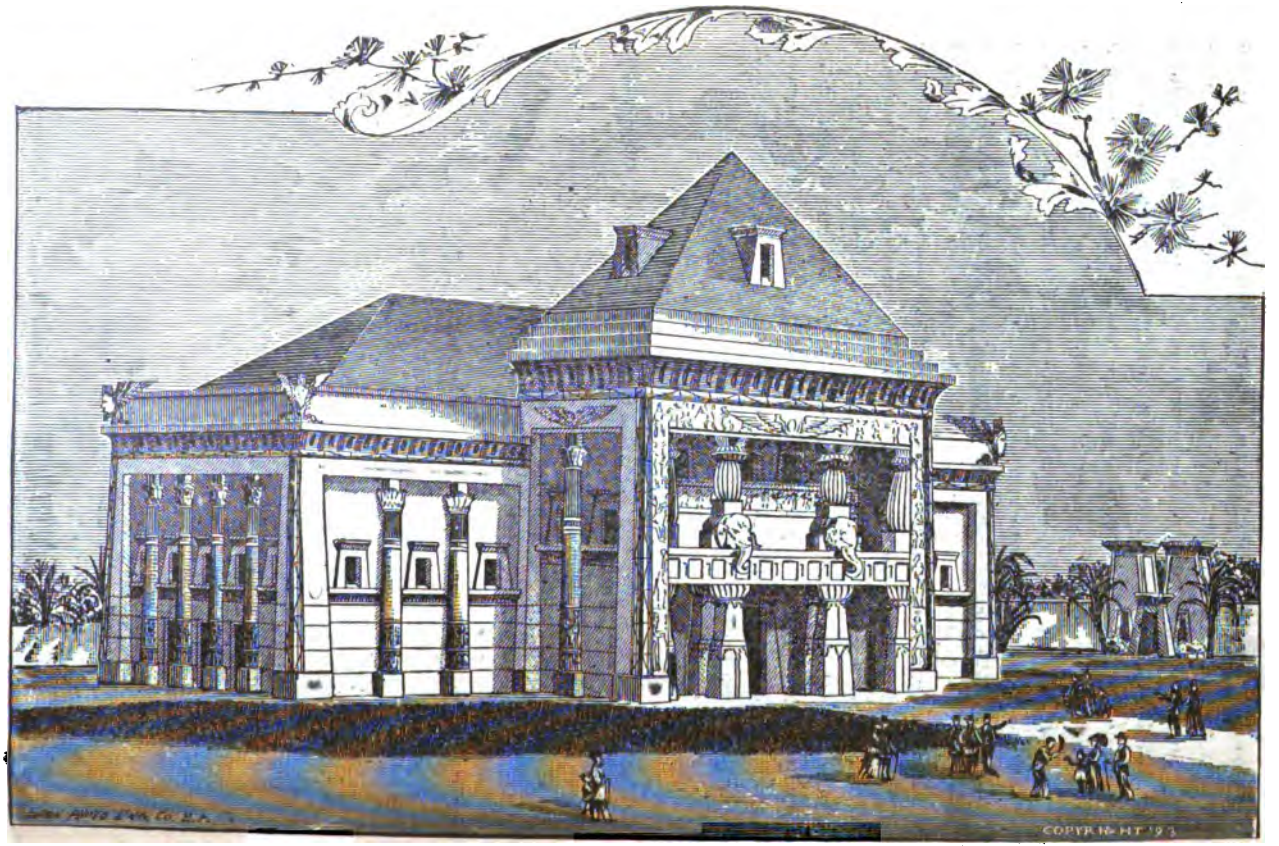
A Song of the Sierras.

I'll sing a song of a cabin home,
Of a miner old and gray;
Of a mountain steep
And a forest deep,
And a faultless summer day.

Of deserted camps with the roofs caved in,
And an unhinged door ajar;
Of a wild bird's lay,
On a day in May,
When his spirit went afar.

I'll sing a song of a miner's life,
Of hopes and loves long fled;
Of a life that's past,
And rest at last
In a grave with the pauper dead.

—Charles H. Deuel in the Oroville Mercury.



CALIFORNIA MIDWINTER INTERNATIONAL EXPOSITION.—ART BUILDING.



PUBLIC SCHOOL OBSERVATORY, OAKLAND, CAL.

THE

PACIFIC EDUCATIONAL JOURNAL.

Official Organ of the Department of Public Instruction of California.

VOL. IX. DECEMBER, 1893. No. 12.

CURRENT EDUCATIONAL THOUGHT.

Take and read an educational paper, and show your interest in educational affairs by attending the County Teachers' Association. Read educational and professional works. Keep abreast of the times; you will either advance or retrograde.—*Orange County Public School Manual.*

One most important point, in all the teacher's planning and preparing, will be to see that every pupil, in recitation hour and in study hours alike, has something pressing upon him to be done, and that he is held strictly responsible for the doing of it. In this one thing alone, lies more than half of the whole matter of governing a school.—E. C. HEWITT, Ed. Pub. *School Journal.*

All school news of general interest should be furnished to the local press by the county superintendent; no items are read with more interest, as the public schools are very near to the hearts of the people.—CO. SUPT. MRS. F. MCG. MARTIN, Sonoma.

As the grammar schools alone educate nine tenths of the children, its course should be prepared with the utmost care, and re-adjusted to every real necessity in our rapidly changing conditions of life. Nothing essential omitted, nothing non-essential included; the world has stumbled too long over a weary path strewn with mistakes, for the tender feet of our children to be pained needlessly by one of them.—PRIN. HERBERT MILLER, Stockton.

It is as much a teacher's duty to teach the children to take care of the things that are given them for use, as it is to teach them to read or write.—CO. SUPT. LINSCOTT, Santa Cruz.

America has a standard of success to-day that no republic can long stand and live. There is no resentment, the memory is so short, the arm so feeble, all are so good natured, so willing to be fawned upon, that crimes are tolerated and criminals respected.—PROF. ROSS, Stanford University.

The educational problems of most civilized countries have so many points of resemblance, and we have grown into the habit of learning from one another so, that we are apt to forget the differences and to borrow from their methods without careful sifting. It is a truth as old at least as Aristotle, that the character of a citizen should be molded to suit the conditions under which he is expected to live. As American citizens we should educate the children of this country with a view to their living in America, and not as in England, France, Germany or any other country.—FELIX ADLER.

There are lots of children who on their entrance into the world are burdened with the weight of four or five generations of crime, pauperism and lunacy. The doctrine that the children of the masses must be cared for and that they must be educated out of the tendencies transmitted to them is steadily gaining ground. The foundations for their characters must be laid down deep in the schools.—MRS. SARAH B. COOPER.

Loyalty to duty, respect and reverence for home and parents, love of country, sacred regard for truth, regard for the feelings and rights of others; these and kindred virtues should daily be impressed upon the minds of children. They cannot be taught in formal lessons, but should permeate the regular class work, enter into the daily recitation, and should be specially illustrated by the character, example and daily life of the teacher.—CO. SUPT. T. J. KIRK, Fresno.

A government that curtails the expense of education will be the loser. The unwise economy will be revenged by the fact that such countries will be filled with ignorant and unfit citizens. What is said of a whole country may be said of a small part of it. Whenever the Board of Supervisors of any county lowers the rate for school funds so as to shorten the time of school, it is a sure sign that such Supervisors have not the highest appreciation for education, but on the contrary it may be sufficient proof that their early education has been somewhat neglected.—CARL HENRICH, Glenn Co., Cal.

GENERAL DEPARTMENT

Woman and the Alphabet.

MARY E. SACKETT, PACIFIC GROVE, CAL.

In Colonel Higginson's delightful essay, "Ought Women to Learn the Alphabet," he answers emphatically in the negative. He argues that the only entirely safe way of dealing with the feminine portion of the human race, is to keep it in absolute ignorance. Once allow that peculiar combination of molecules to become cognizant of brain power, and to be given the mysterious talisman of letters, no limit can be fixed to its aspirations, no bounds to its possibilities of achievement.

From the earliest annals of history women have made for themselves glorious names, but they have mostly been those whose lofty stations and royal prerogatives endowed them with exceptional advantages and made them largely the arbiters of their own destinies.

Queen Elizabeth's intellectual gifts and wide learning enabled her to recognize genius and foster it in a kindly soil and genial atmosphere, till its magnificent development made her reign illustrious.

The charm which gave its irresistible fascination to Madam Récamier's exquisite beauty, was her conversational grace and brilliancy. She drew around her the most distinguished savants of the French capital. Like Cleopatra, "Age did not wither her, nor custom stale her infinite variety."

Though possibly, under the changed conditions of modern American life no individual may shine like these "bright, particular stars," yet an educational impulse has been given the entire social organism, that will disperse the mists of ignorance like the broad rays of the rising sun.

Woman is beginning to realize her absolute personal identity, to comprehend that she can make herself a unit, unless she chooses to dwindle to a fraction. The more thoroughly she understands how to make the most of herself, the better she can fill her position in life, the better carry out her obligations to society, and the holier duties of daughter, sister, wife and mother.

Just sixty years ago Oberlin opened its collegiate doors to her, and now high schools, colleges and universities dispense the world's learning without regard to sex. California offers her its entire curriculum of public instruction.

Women having by these means made some progress toward acquiring a knowledge of the alphabet, the question before us assumes three phases. Have women learned the alphabet well enough to teach it; well enough to superintend the teaching; well enough to choose the superintendents?

A partial answer may be found in the annexed statistics, furnished by the county school superintendents. A study of the California public school system and woman's work in its various departments includes a cosmopolitan range of opinion, and affords admirable material for philosophical investigation.

Nearly 5,000 women are now teaching in our public schools, with over two hundred in the higher grades, and both State and Stanford Universities are beginning to elect them to professorship. Though some of this host of teachers have not attained ideal excellence, they have reached the required examination standard, at least. The highest qualities of the successful teacher are beyond arithmetical tests. That many are ambitious to excel in this profession is evidenced by the number of young ladies in attendance at the Normal schools.

Fewer enter the universities. The highest professional prizes being practically beyond their reach, one strong incentive is lacking. There is, however, an onward movement in this direction. It is gradually becoming apprehended that the teacher of little children needs inexhaustible stores of learning and wisdom, with quick, sympathetic perception of childish thought. University professors do not need to know *everything*. Professor Ichthyosaurus can send for more exact information to Professor Plesiosaurus, and his students have begun to learn the limitations of human knowledge. But the soul of the child newly come in "trailing clouds of glory" is filled with eager questionings concerning the whys and wherefores of the universe rising around him with its infinities of time and space.

He must know *what* the wild waves are saying, and *who* holds them in the hollow of his hand, and when unanswered experiences a sort of surprised wonderment. The wisdom of the wisest is far too little, and our standards are necessarily lowered to the attainable. The choice of a teacher is a matter of serious import, and peculiar qualifications are demanded of those who assume this responsibility.

The absolute book knowledge has been approximately measured and certified, but the possession of sufficient education to form independent judgment, as well as experience in teaching and business affairs is eminently desirable. The statutes provide for three trustees in each district, to make the administration more complete, vacancies being filled by appointment. Most districts have more or less women who have had experience in teaching, who are familiar with approved methods, the general routine of school duties and the school law, and have sufficient public spirit to interest themselves in educational matters could they only be given an authoritative voice. Frequently delicate points arise, and certainly the laws regarding purity, morality, and scientific temperance, are more likely of enforcement under the administration of women. When, during his visit to the school, a trustee sits smoking his cigar, it is difficult to make the pupils feel that "tobacco is a filthy weed;" when he owns a distillery it would be a courageous teacher who dared make it an object lesson against intemperance.

Although nearly five thousand women are teaching in this State, less than two hundred and fifty are serving as trustees. The opinion of a majority of county superintendents is that the experiment has proved a success. That no more are in office is simply because women have no vote. It is not putting women into politics, it is putting politics out of the schools.

It is a frequent charge that teachers have been employed in payment of political debts, and trustees elected who had a political pull, or a political ax to grind.

Woman's purity is no more soiled by looking after the interests of the district school, than by teaching that school. It is generally conceded that the work of the family moves along more effectively under the joint supervision of father and mother. The district is merely an extension of family relations, and those mothers who have successfully trained their own children would greatly advance its educational progress by having equal control in its management. By becoming responsible agents they will rise to the occasion, and acquire poise and steadiness of action. It is little wonder if after having been bottled up for generations, they sometimes bubble and foam like uncorked champagne, with their newly acquired dignities.

Let it be woman's province to keep the fountain pure, to instill the principles of virtue, temperance, and patriotism into the minds and hearts of American youth, and help them to become worthy American

citizens. To man can then be left the less pleasing tasks of cleansing the Augean stable of vice, of dealing with whiskey rings, with paupers and penitentiaries.

The public opinion of California as crystallized in its statutes, has conceded that women have learned enough of the alphabet to teach it; that she is competent to select the teachers; to superintend trustees, teachers and schools; it only remains therefore to take another step and admit that they have learned enough to vote at school elections, and for school officers. There is a peculiar anomaly in the laws which empower women to hold offices for which they are not themselves electors. The world moves, and it cannot be long before this educational advance is taken.

The governor discovered technical flaws in the school suffrage bill passed by the last legislature, and therefore withheld his signature, but surely the united wisdom of California educators is adequate to framing one that would have no serious drawbacks for either city or country.

In order to gather a general concensus of opinion from Modoc to San Diego, the questions have been asked:

14. Do you favor women holding educational offices?

15. Do you favor women voting at school elections?

Several have given no answers. From a county where one lone woman serves as trustee, the Superintendendent writes, "as trustees, women are 50 per cent. failures." He does not state the male percentage. From the icy slopes of Mt. Shasta, Siskiyou answers "no," while the orange groves hasten to give a glad assent. Trinity says "*no*, at *no* election," and Colusa "*no*, at *every* election," then "*yes*, better *that* than *nothing!*"

LAKE COUNTY writes: Women are more painstaking and conscientious as well as ambitious, and should stand equal with men in educational affairs.

LASSEN.—The influence of women in our schools has had an elevating tendency on the character of the young.

PLUMAS.—In my county women are generally conceded to be the natural, therefore the proper instructors of the young. People are quite willing also to acknowledge that we have the right to fill educational offices, though in order to succeed, a woman is required to expend twice the energy required of a man.

SHASTA is the banner county. It is the pioneer in the good work, and around it are grouped most of the counties which have elected lady superintendents. It has had women on the board of education for more than *thirty years*. It has had a lady superintendent for *nineteen years*, having been the *first county* in *California* to elect a lady to that office.

SAN DIEGO ranks next in number of women in educational offices and the husband of the one who wrote "Liberty's Bell" sends this: I hope to live long enough to see women vote and enjoy the liberty that men have.

SAN LUIS OBISPO stands third in line. Yes, vote at all elections. I am in favor of conservative, intelligent suffrage without regard to sex.

VENTURA.—I favor good school officers without regard to sex.

KERN.—*No*, to question 15, it is a qualified one. If you mean for a school trustee—then yes. There are objections to the law recently framed, but if properly arranged I see no objection. In fact I am not prepared to say that actual good might not result.

SOLANO.—Yes, whenever woman deserves it.

MONTEREY.—14, when capable, yes. 15, yes, by all means.

MODOC.—14, I am, under certain conditions. 15, where a widow with children.

AMADOR.—I favor women in 14 and 15 with an educational qualification, same as I do men.

ALAMEDA.—I am inclined to favor extending the right to vote and to hold educational offices to all citizens without regard to sex or condition, other than an educational qualification.

MENDOCINO.—Yes, at school elections, or any other.

MARIN.—In all matters concerning the education of youth, women should have equal rights with men.

SACRAMENTO.—My observation in this county warrants the assertion that women make superior officials.

PLACER.—In my experience of twenty-three years of school work in this county, I am inclined to believe that women make efficient trustees. A very few make efficient principals, but I have not met one

woman teacher that was fitted by nature and education to be an efficient superintendent.

PRINCIPAL SAN JOSE NORMAL SCHOOL.—I live in the country. In my school district the three trustees are women. They are first-class trustees. I am acquainted with the women who are county superintendents of schools in this State. I know that they are doing good work. Women fill educational positions to the satisfaction of all parties. I believe they ought to be given the legal right to vote for school officers. I think that more interest will be manifested in school elections if women were allowed to vote.

PRINCIPAL OF CHICO NORMAL SCHOOL.—I myself favor women holding educational offices and voting at school elections.

PRESIDENT LELAND STANFORD JR. UNIVERSITY.—I favor municipal suffrage for women.

PRESIDENT UNIVERSITY OF CALIFORNIA.—I am in favor of giving educational offices to competent women; such as have already been elected to superintendents' positions in some of the counties of our State. I see no objection to giving woman a voice in school elections. Some have a property interest in the establishment and conduct of the schools. Many have a very deep interest in the proper management of the schools, for the sake of their sons and daughters.

THE SUPERINTENDENT OF PUBLIC INSTRUCTION expresses himself in strong, unmistakable language. The twelve women superintendents in efficiency compare very favorably. I claim the credit of being the first to advocate the change of the fundamental law of the State in such manner as to allow women to vote for all educational offices. I was, and am still in favor of women voting for all educational positions, and of holding any educational office. By Art. II, Sec. 1, of the Constitution, women are excluded from the right of suffrage; and before such right can be enjoyed by them, this section must be amended. I am in favor of a constitutional amendment entitling women to vote at any election, because I believe the tendency of such a law would be the betterment of our elections. I certainly favor the holding of educational offices by women; as to the other offices, I am not prepared to say yes, or no.

The following table is submitted as showing the actual situation in California and as indicative of the trend of public opinion:

TABULATED LIST OF WOMEN IN CALIFORNIA PUBLIC SCHOOLS AS OFFICIALS AND TEACHERS, FROM STATISTICS FURNISHED BY COUNTY SUPERINTENDENTS.

COUNTIES.	County Superintendents	Deputy Superintendents	County Board Education	City Board Education	Districts 1 Woman Trustee	Districts 2 Woman Trustees	Districts 3 Woman Trustees	Total Number Woman Officials	Principals City Schools	Teachers High Schools	Teachers Grammar Schools	Teachers Primary Schools	Total Teachers	Favor Women Holding Educational Offices	Favor Women Voting at School Elections
1. Alameda		1			1			2	7	22	133	201	363	Yes	Yes
2. Alpine	1		2					3			1	2	3	Yes	Yes
3. Amador											8	32	40	Yes	Yes
4. Butte		1			3			4	1		75	6	82	Yes	Yes
5. Calaveras		1			4		1	8			38	8	46		
6. Colusa	1		1		1			3		1	14	19	34	Yes	Yes
7. Contra Costa					2	1		4	1		29	32	62	Yes	Yes
8. Del Norte	1	1	1					3			6	2	8	Yes	Yes
9. El Dorado					3			3			11	27	38	Yes	Yes
10. Fresno		1	2		5	2		12	1	4	85	57	147	Yes	Yes
11. Glenn					1			1			5	19	24	Yes	Yes
12. Humboldt					1			1			16	78	94	Yes	Yes
13. Inyo			1		1			2			6	4	10	Yes	
14. Kern		1			5			7		1	20	38	59	Yes	Yes
15. Kings			1					1			18	3	21	Yes	Yes
16. Lake	1		2		4		1	10	1		21	20	41	Yes	Yes
17. Lassen	1	1	2					4			7	11	18	Yes	Yes
18. Los Angeles			5	9	2			16	39	23	119	280	461	Yes	Yes
19. Madera			2		1			3	1		23	5	29		
20. Marin		1	2		2			4	1	1	15	35	52	Yes	Yes
21. Mariposa	1	1	2		4			8			11	15	26	Yes	Yes
22. Mendocino		1			2			3			35	50	85	Yes	Yes
23. Merced			2		1			3			18	20	38	Yes	
24. Modoc					1		1	4				18	18	Yes	
25. Mono	1	1	3					5			1	10	11	Yes	Yes
26 Monterey					3		1	6		2	40	74	116	Yes	Yes
27. Napa	1	2	2		1	1	1	11		1	17	35	53	Yes	Yes
28. Nevada										2	22	30	54		
29. Orange			1		2			3	2	2	18	38	60	Yes	Yes
30. Placer			1		3			4			7	49	56	Yes	Yes
31. Plumas	1		3		3		1	10			17	3	20	Yes	Yes
32. Riverside					2			2	3	5	16	58	76	Yes	Yes
33. Sacramento			1		2	1	1	8	1	5	88	81	175	Yes	Yes
34. San Benito			1		2	1		5	1		3	39	43		
35. San Bernardino			1		5			6	5	4	15	84	108	Yes	Yes
36. San Diego		1	2	2	19	1	1	29	5	5	51	80	141	Yes	Yes
37. San Francisco									52	14	349	412	827		
38. San Joaquin					1	1		3		3	37	65	105	Yes	Yes
39. San Luis Obispo			1		7	6	1	23	1	1	48	45	95	Yes	Yes
40. San Mateo			2			1		4	1		15	37	53	Yes	Yes
41. Santa Barbara			1		6	1		9	3	1	19	50	73	Yes	Yes
42. Santa Clara		1	3				1	7	10	6	70	124	210	Yes	Yes
43. Santa Cruz					9	3		15		5	33	62	100	Yes	Yes
44. Shasta	1	1	3		20	6	1	40			40	41	81		
45. Sierra		1	2		2			5			3	16	19		
46. Siskiyou					4			4			10	38	48		
47. Solano			2		3			5	3	2	10	73	88	Yes	Yes
48. Sonoma	1	1	1		7	1	1	15		6	60	107	173	Yes	Yes
49. Stanislaus															
50. Sutter															
51. Tehama	1	1	3		2			7			47	13	60	Yes	Yes
52. Trinity			2		2			4	1		4	11	16	Yes	
53. Tulare			2		2			4			35	50	85	Yes	Yes
54. Tuolumne															
55. Ventura					1			1	2	2	13	17	34	Yes	Yes
56. Yolo			1		2			3	2		16	49	67	Yes	Yes
57. Yuba			1		1	1		4		1	2	6	9	Yes	Yes
Total, 54 Counties	12	18	64	11	155	27	12	351	144	119	1814	2769	4855	47	43

SUMMARY.

1 Deputy Superintendent Public Instruction.
105 City and County Officials.
245 District School Trustees.
144 Principals City Schools.
33 Teachers Normal Schools.
119 Teachers High Schools.
4889 Total number Teachers as reported from 54 counties.

A Study of Shells.

BY C. M. DRAKE.

II. CLEANING.

This is the disagreeable part of shell study. But if people have babies they must learn to wash their faces. Fortunately shells keep clean longer than babies do.

First we boil them—the shells I mean. Then we remove the animal with a knife, or an old crochet hook. Save the operculums, and do not get them mixed. If you cannot get all the animal out, the flies will help you, if you put the shells out in the sunshine. Ants will prove the best of helpers, too.

The outside of some shells will need scrubbing with a stiff brush, and soap and water. Some people use diluted acids, but I would not advise this, for the acid tends to destroy the natural colors, the epidermis, and even the texture of the shell itself. Many of the shells you see in the shell stores are cleaned with weak acid.

It does very well to have one or two shells each of such kinds as the Abalone or muscle, not only cleaned with acid, but ground and polished. Such shells are like colored photographs, and have a class of admirers who need something bright—to look at.

The odor of some shells will always remain somewhat unlike the perfume of the rose or the violet. A little diluted carbolic acid, or some other disinfectant may help matters a little, but there is a far better way than this. Educate your nose to love the smell. I suppose it can be done, though my nose is not a graduate. I have known doctors who say they like the smell of a dissecting-room. I have seen women look pleased at the odors of boiling cabbages and onions. Yes, I have even known schoolma'ams to say they liked the smell of

a good cigar, though I suspect it was the man-flavor they really liked. So I really think we may get to liking the smell of shells.

Stuff the univalves with cotton, and stick the operculum to the cotton with a drop of glue.

While the ligaments of your bivalve are still wet and flexible, close the shells in the way they naturally were closed when alive, and tie the shells together with a thread. When the ligaments are thoroughly dry, the string may be removed, and the shell will remain as nearly shut as is desirable. Some put a drop of glue between the lips, but that prevents our seeing the inner part if we so desire.

If you boil your shells just before dinner, you will find most of the bivalves contain nice morsels for your palate.

We put a *very* little sweet oil on a woolen rag, and rub those shells that are glossy and those that are covered with an epidermis.

Now we will need some help to name our shells. This help the most of us will have to get from books. But in your frequent visits to the beach you will be sure to find some good conchologists who will help you on doubtful shells, and give you the best of advice as to where you may find others you may not have.

III. NAMING THE SHELLS.

Naming shells is a little like naming babies. It is much harder to name the first one than the second. Ned and I put our shell on a large table, and then took down Josiah. We could not keep house without Josiah, and you can't if you are going to study our California shells. Our Josiah's full name is "West Coast Shells, by Josiah Keep." Of course that is too long a name for use twenty times a day, so we simply call our book "Josiah," and if we are in doubt about a shell, we say "Where is Josiah?"

The real Josiah Keep is a well-known teacher in Mills College. He was here at Long Beach this summer, and my wife attended his class in conchology, and she says that he is a *very* nice man. But *I am sorry for Mrs. Keep.* Yes, dear Madam, I, too, know what it is to have the other half wild over shells. I know what it is to find Scallops in my easy chair; to go to bed with Sea Urchins; to walk at night with bare feet on Chamas and Star Fish; to find shells in the cake, and to feel a little sea-sick when I open the parlor door.

The first shell Ned found he could name was *Fissurella volcano.* This is a very common Limpet with what is called a key-hole in the top, which answers to the crater of the volcano. The little fissures down its sides show why the genus is called *Fissurella*, and the name,

volcano, for the species, is also a very good one. Pictures help the beginner to name the shells, and the descriptive text adds certainty to his guesses.

There are three classes of names given to shells. The best names are somewhat descriptive of the shells. Such names are those like *Pecten* (comb), *Cardium* (heart), *Ianthina* (violet-colored), *Hipponyx* (horse-hoof), *Saxicola* (rock-dweller), *Chiton* (mail) and others too numerous to mention. They would include such specific names as *Californicus*, which tells where the shell is found.

Other shells are named after their discoverer. The best conchologist I have ever met is Mr. Henry Hemphill, of San Diego. I do not know how many new shells he has found, but Hemphill is attached to many a one. Look through a catalogue and you will see Cooperi, Keepi, Nuttalli, and I know not how many more. I do not at all admire the practice of naming shells, plants, or even places after people. Yet it is better than giving them the names of the old-time gods and other monsters of classical stories. There is some excuse for Triton, as he was a shell-fish, but none for the Ammonites, or Diala. Why should Semele be honored, or Vallonia, or even Venus? I never considered Venus a well-behaved woman. Neither was Lucina (Juno).

But when supposedly sensible people still name their babies as they do, we must excuse even our scientific men for foolish names.

Ned found it much more easy to remember the descriptive names than the others. None of the shell books I have give the meanings of more than a few of the names; so we took our Latin and Greek dictionaries and hunted them up, or what we could find. I suspect the Latin of some of the names is fearfully and wonderfully made. It is so with plants. Even some of the descriptive names did not seem to be very happy selections, but that may have been our ignorance.

We made a list of the names, marked their sounds, put down our meanings, and then we spent an hour or two studying them as a boy studies his words in school. In this way we made the names familiar to us, and then it was much easier to attach them to the right shells. Then we marked each shell with its name, and named the shells over a number of times. We tried to call them always by their scientific names. If not the scientific name, we used as literal a translation as we could give. Nothing does more to give one an air of learning than a ready command of scientific names. And I have had lots of fun, sometimes, with a list of Latin names.

Besides Mr. Keep's book, we used, to identify our shells, Wood-

ward's "Recent and Fossil Shells," $3; Tryon's "Manual of Conchology," $6; Sowerby's "Common Shells of the Sea Shore," 50 cents; some books of natural history, and others of ocean wonders, and the numbers of the *Nautilus*, and other magazines of zoology.

IV. SELLING, BUYING, AND EXCHANGING.

The more shells you get, the more you will want. So, unless you keep moving about, you will exhaust the shells of one place in the course of a year or two. You may still occasionally find a new kind, but not very often. You will then become a shell buyer and exchanger, more than before. Of many kinds of shells, you will have collected hundreds of the same species. These you can sell and exchange.

What are your shells worth? That will be hard to say; for the value of most shells is an uncertain quantity, somewhat like old stamps. But you can tell what you can afford to sell them for. To this price add the postage. You can afford to sell most shells for five cents apiece, or ten for 25 cents. Heavier shells may cost more for postage.

We made a little catalogue of our common shells, in alphabetic order, with our prices for one or ten. I got a ream of letter paper, ruled only on one side. On the blank page of the half sheets, we printed our list of shells. The other side we write our letters. Now we are ready to buy or exchange. We go to a shell store and show our catalogue, and ask the proprietor what shells he will take in exchange for his, at 50 per cent. off on our list.

You put a little ad. in an Eastern paper like this: "Fifteen named shells for 25 cents. Exchanges wanted. C. M. Drake, Cal." That may bring you many cash orders, and some excellent exchanges.

Mark each shell on a separate piece of paper like this:

ACMÆA PATINA. ESCH.
SAN PEDRO, CAL.
COLLECTED BY C. M. DRAKE.

This you wrap up with each shell, in a separate piece of paper. The 'Esch.' is the authority for the name. He is the same man who spoiled the California poppy with his name. Do not neglect to put the authorities down. They look learned, even if you do not know anything about them, and they are always given in a catalogue. Of course the second line shows where the shell was found.

You will find other shell collectors in various places, who will be glad to exchange good specimens with you. After you get fairly

started with shells, you will be surprised to find so many people who collect. There are over a dozen in this little town of Long Beach. It is a very pleasant work; it is healthful; it is profitable in many ways. It will cost you time; it will cost you money. But still it pays. When you have gone this far with shells, you have done about as much as the most of those do who get interested in them. This has been play, but now you are ready really to study chonchology.

V. STUDYING.

To study any animal or plant properly, we must watch it through its life history. We must know its parentage afar back. We must dissect, and compare it with others. We must know its environment, especially its enemies. Get an aquarium. A big earthenware pan filled with sea water is not to be despised. Give yourself problems, and think them over, day after day. Study the evolution theory with much care. You will be sure to be an evolutionist if you study animals or plants long enough. Study the causes of the variations you will find in color and shape. Know why each shell is found where it is. Why are they so plentiful one month, and gone the next? Notice the protective resemblances. Why are some shells so glossy? Why are others so rough? These and hundreds of other questions are still awaiting full solutions. We know something of the reasons, but the most is yet to be learned.

P. S.—Ned says I have omitted oyster patties and clam chowder. He wants the schoolma'ams to study their construction. Why?

Notes From the Graduate Seminary for Child-Study, State University, Department of Pedagogy.

[The following is the report of one of the members of this seminary for the month of August, 1893. The child observed was born December 22, 1889. She will be designated in this report by the letter R. The observer is the child's mother. A part of the outline of topics which was followed in making the observations is indicated by the headings of the several sections. I present the report without comment or correction. It seems to me an interesting contribution to our material for future generalization, and especially suggestive in certain portions to kindergarteners, who have to do with children of about R's age.—E. E. B.]

INTEREST.

August 1. To see whether she was more interested in color than in form or *vice versa*, I experimented with colored pieces of paper torn in scraps compared with accurate shapes cut out of white paper. I

asked her which she wanted. She carefully selected a square of white paper and a scrap of red paper, and said that she liked them both just the same.

August 3. Two days after I repeated the experiment, tore off some irregular pieces of bright-colored paper without form and compared them with a very elaborate design cut out of white paper. She at once chose the form. I tried this several times, and she each time showed a preference for the form rather than the color.

August 10. I gave her a box of geometrical figures, uncolored, and some bright balls, and asked her which she wanted. She selected the many-sided hexagon, without color. I then gave her a handful of marbles where the form was the same, and she selected the brightest-colored ones.

August 15. I gave her a picture-book, with bright-colored pictures, and some that were not colored. She looked the book through and chose a picture without color, but with considerable variety of form, a house in the background with a little girl playing with her kittens in the foreground. In this case she may have been influenced in her decision by the pleasing subject rather than the form.

August 19. I gave her a pencil and paper and asked her to make me something pretty. She came back in a few moments and said that she had made "papa's" picture. It was not pretty, but there was some crude idea of the form visible.

August 28. She came to me and asked me to see how many letters she could make on her fingers. She made A, W, X, C, O, P, and flew into a passion because she could not contort her fingers into a small g. Since then scarcely a day has passed that she has not asked me to see some letter that she has formed with her fingers. In all this I think one can see her interest in form developing.

September 5. She brought me some pictures of some brownies with very thin legs and feet turned up at the toes, and said that their feet were all wrong, and that their legs looked hungry.

September 13. I gave her the scissors and a piece of paper. She cut out about a dozen "oles," as she called them, meaning O's, and tried to cut out a doll, but did not succeed.

COMPARISON OF OBJECTS.

In a great many cases that I tried she would notice resemblances first and then point out the differences. In one or two cases she would point out the differences first.

August 2. She called me to the window to see a little boy, who

she said looked just like her small uncle B. I at once noticed the resemblance.

August 5. She was looking through the family album and continually telling me who the pictures looked like. She would first speak of the resemblance and then of the difference.

August 9. I was out walking with her and we met a little girl. R. said, "Mamma, that little girl looks just like H., but her apron don't."

August 19. I gave her some bright bits of calico to look at. She soon brought one to me and said that it would look like her apron if it didn't have black spots in it."

September 2. I gave her older sister and herself each a doll, the two being very much alike. She looked them both over carefully, and said to her sister, "My doll has a smile, and yours hasn't." It was only in cases of comparison where she wished to excite her sister's envy that she spoke of the difference before the resemblance.

ARE THEY EQUALLY INTERESTED IN TRUE AND IN "MADE-UP" STORIES?

When I tell her a story, the first question she always asks is: "Is it a true or a made-up story?" She wants the story just the same, whether it is true or not.

She is as much affected by the stories I tell her are not true stories as those she knows to be true. As soon as I begin to tell the story, she forgets everything in her interest in the story. I have told her stories about animals, fairy stories, stories about little boys and girls and Bible stories. Those she prefers and calls for most often are stories of little boys and girls, without the element of improbability. If I tell her a fairy story, I have to explain away all the element of improbability before she is satisfied. Anything that she has not experienced herself, she considers absurd and improbable.

All the stories I tell her must end happily or she is broken-hearted; but when I ask her to tell me a story, she delights in making it as blood-curdling as possible. Everybody in it is killed or comes to some untimely end. When she feels that my feelings have been sufficiently harrowed, she calms me by telling me to never mind, she made up a bad story; it isn't true. Bible stories to her are simply stories of people like her own family. She goes into the closet when anything goes wrong and talks to God as she would to her papa. She went into the closet one day last week when there had been a slight difference of opinion in the family, and asked God to please come and

get her mamma, and bring her a better one. She supplies the answers to her petitions herself in a very loud tone, and then asks me if I heard what God said. I have not told her any stories of legendary or historical heroes.

DOES SHE READILY PICTURE LOCATIONS AND DIRECTIONS WITH THE STORIES?

I think she does. She always askes what street the characters in her stories live on, and often asks me to point from the window the exact house. That will satisfy her.

She can go to any place within two or three blocks of the house that I have already taken her to a few times. She wanted very much to go out and put a letter in the box about a week ago. The box was at the other end of the block. I told her she could, and prepared to follow her at a safe distance. She was so elated with importance at what she was doing, that she forgot all about the letter-box until she was a half block beyond it. She stopped and thought a moment, and then marched around the corner to another box, mailed the letter there, and came back without seeing me, and said nothing about her mistake.

IS HER TIME-SENSE AS WELL DEVELOPED AS HER SENSE OF LOCATION?

I think it is. She has a clear conception of yesterday, and measures the days to come by the number of *sleeps* she must take. If I promise to take her with me somewhere to-morrow afternoon, she will ask, "After one more sleep, in the morning when I get up, after breakfast, after lunch, *now*, Mamma?" meaning that after all that has passed it will be *now*. A week or two ago she was very anxious to have Sunday come, as she had a new dress she wanted to exhibit in Sunday school. I told her in five days it would be Sunday, or just as many days as she had fingers on her hand. So each morning when she awoke she would put one more finger down and say, "One more sleep gone."

I have not observed any connection between her time-sense and her sense of rhythm in poetry, music, and movement.

WHAT SIGNS DOES SHE SHOW OF INTEREST IN THE PARTS OF THINGS?

She had a little Japanese doll which she deliberately broke one day this month to see what made it cry, and after she had found its vocal organ wanted me to stick it together again. With most of her toys, after she has played with them awhile she wants to take them to

pieces to see what they are made of. After she has satisfied her curiosity, her interest in that particular thing ceases. She does not care to put things together again; and if she does so, it is because she is made to.

She is very fond of her blocks, and for the last few weeks has been building nothing but Catholic churches. I took her into the Catholic Cathedral about six months ago, and the interior made quite an impression on her. She wanted to know why her Sunday school wasn't pretty, too. When I give her pencil and paper, she either prints some of the letters she knows, or tries to draw animals and people.

IN WHAT PARTS OF ANIMALS AND PLANTS DOES SHE SHOW INTEREST, AND WHAT PARTS OF HER OWN BODY?

As a little baby she first showed interest in her hands and then in her feet. Now at three and a half or more, she seems most interested in her hands, often asks me if I don't think they are "cute." With animals, she seems to notice their eyes more than other parts of their bodies. In plants she is attracted by the bright blossoms.

NOTE INSTANCES OF CONSCIOUS IMITATION IN WORD, LOOK, GESTURE, DRAWING, OCCUPATION.

She talks to me or to her sister or to her dolls just as I talk to her. If I correct her for anything, she corrects her sister in the same way, and often tries to correct me. She told me about a week ago that she should think a girl of my age would know better than not to take her dear little girl out to the park. In looks, gesture, and drawing she constantly imitates her sister or anybody that she is with. Sometimes she will be playing by herself perfectly contented when her sister will come in and begin playing something different. R. immediately loses all interest in her occupation, and wants to do just what her sister is doing. In occupation it is the same way. If I sew, she wants a needle and thread and wants to sew to. If I cook, she wants something to cook. R. delights in playing that she is some one else than her real self. Sometimes for two or three days at a time she will carry this out. Her grandmother is very lame, and walks with a cane and that is a favorite role of R.'s.

WHAT EMPLOYMENTS OCCUPY THE GREATER PART OF HER TIME?

That depends with R. to a great extent upon her companions. Her favorite occupation if she is left to herself is playing what she calls *Mrs.*, in which she is generally the head of a family of dolls. Some-

times her mother and sister are included in her family. The greater part of the time, in fact, she is making believe she is somebody or some animal. Often when I call her by name she corrects me. She says, "I isn't R.; I is H.," or "I." or "geega" (her name for her grandmother). If I suggest that she play something different, she will often seem eager to do so, but I have noticed in a great many instances that she is apt to drop the play I suggested and return to something she has thought of herself. She is certainly more interested in things that she takes up of her own accord than in things she does at the prompting of others.

DETERMINATION AND YIELDING.

She is exceedingly self-willed. In fact, I have never encountered so determined a will in a child of her age. She wants her own way, and is determined to have it, and rarely yields at once, is very apt to show active resistance to any one opposing her. After she has been made to yield, the thing is immediately forgotten. If she has been punished, she wants me to kiss her, and tell her she is my little comfort again. I cannot see up to this time that yielding has had any very great effect on her disposition.

When baffled by inanimate objects or forces she is more apt to resort to force than to intelligence in overcoming the resistance. If she bumps her head against the table her first impulse is to strike the table for hurting her. Her second impulse is to kiss the table for having hurt it.

With R., the approval or disapproval of elders, I think, determines questions of right and wrong. Still in some instances she has seemed to show a real standard of right and wrong. If she has done anything wrong, she never denies it when I ask her, but freely admits it, and lately has told me on one or two occasions that she had already punished herself. One day last week she did something I had distinctly forbidden her to do. And the first intimation I had of her having done this thing was her coming to me herself, telling me about it, and asking me if she should shut herself in the play-room for a long time because she had been so bad.

☞ ATTEND the meeting of the State Association at Stockton, and witness the opening of the Midwinter Fair on the same trip.

METHODS AND AIDS.

The Study of Grammar Made Less Distasteful.

MAY F. UPTON, MERCED.

The method of teaching grammar which has now, after many years' experience, been adopted in my work, has been the outcome of a series of experiences with discouraged pupils, and a no less disheartened instructor.

Do we not all know *this* experience? A class of bright pupils, who but an hour ago appeared before their teacher as eager, interested students in arithmetic, or enthusiastic about a geography lesson, now come slowly forward, lagging, uninterested, seemingly dull. For is not this *grammar?* Questioned as to the day's lesson, what have we? The forced manner of recitation, puzzled faces—introspective, as of those who search the memory for mere words which to them mean nothing. Then does the teacher, if inexperienced, say to herself, most unjustly, "Ah, this want of interest, this dullness, must be the result of faulty instruction and we will effect a change for the better at once." With this laudable end in view, she explains, corrects, explains again and again and yet again; but the dullness is not banished, the lesson is still recited as a mere feat of memory, the interest is yet wanting. What is at fault? Not the instruction. *Perhaps* not the text-book, but the non-receptive mind of the pupils to whom grammar is an abstraction. Do we not all remember how little we understood, practically, of language-work, of the classification of words, phrases, clauses and sentences, until, grown out of our grammar grade and into the larger field of rhetoric, we learned the expansion of these into the paragraph, the beautifying of this by figures of speech, and, above all, the necessity of understanding the uses of *words*, as the foundation of all the infinite possibilities of expression.

But the teacher, the discouraged teacher, who was going to improve so wonderfully upon the methods and results of her predecessor! What is left for her to do? Only what we have all done, over and over again. Repeat the lesson, explain, illustrate upon the blackboard, then go on to the next subject, trusting that some future consideration

of a kindred subject may throw side-lights upon the work preceding it, or that the advancing mind of the pupil will retain the *facts* taught until they open to his understanding. This was, in a general way, my experience for many years. There were, of course, exceptional pupils, we find them in all branches, who grasped the whole subject, made it their own, and wondered at the apathy of the rest.

From such general experience has my present method of teaching grammar come. It is, briefly, this: I teach the subject, until the last year of the grammar grade, orally, using the received text-book only as a book of reference.

HOW WE BEGIN.

We begin by talking about language, as a whole. Then, just as in geography we consider the earth as divided into its hemispheres, continents, grand divisions, countries, and so on down to cities and towns, so we consider language in its grammatical divisions of word, phrase, clause and sentence, assuring the learner that these heads comprise absolutely all the principles they will be called upon to consider in learning grammar. We place upon the board this form:

Language. { Word. Phrase. Clause. Sentence.

We talk about it for a short time, in a general way. We instruct the class to bring us, next day, the definition of the word *language*, learned from text book or dictionary, or, better, both. In due course we define word, phrase, clause and sentence.

When these, illustrated again and again by board-work by pupils and teachers, and by many written exercises by the former, are well understood, we are ready for special work upon each subject, beginning with *Words*. Again we define a word; we learn that all words are *classified*, for our convenience and according to their use, in eight divisions, called *Parts of Speech;* and the teacher suggests that, as we must recognize each class readily, we need to make its acquaintance before going further. Now begins the search, in text-book or dictionary, for the meaning of the word *Noun*, and the consideration of the noun itself follows, until the class know it *by sight* readily. Then, with a brief explanation to the effect that they will have much to learn about the properties of nouns later in book-work, we take up *Verbs*. Here I make one special effort. It is that the learner shall know the verbs which assert "being" and "state of being" quite as well as those

which assert "action." We are only endeavoring, at this stage, to *recognize* the verb, and to learn its importance as the support, or *backbone* of the sentence. At this point we show that our thoughts can be fairly expressed with merely the noun and verb, no other classes of words being used, but, by illustration (*Bird sings*, *Boy runs*, etc. on board) lead the pupil to discover for himself that, in order to express an *exact* thought, both noun and verb need assistance.

ADJECTIVES AND ADVERBS.

When this is well conceived by all, the teacher suggests supplying the need of the noun by giving it its natural ally, the *Adjective*, and, *at the same time*, the verb its *Adverb*, the class going through the usual form of definition, illustration and application. I have had much better success treating the adjective and adverb since I have presented them simultaneously, and immediately after the noun and verb, and I need not say to any practical teacher that their seeming to find out facts for themselves is of the greatest advantage to the learners. Finally having amended our sentences, every pupil and the teacher illustrating upon the blackboard, we look them over. But, though "the-little-bird-sings-sweetly" style of sentence is a marked improvement upon its predecessor, we conclude we would like to know more particulars as to time and place than the amended sentence affords, and the teacher suggests adding a phrase. (You remember the definition of *Phrase* has been learned by the class, already,) to give us the desired information. A pupil offers "in the morning," Good! We now have "The little bird sings sweetly in the morning." Our sentence is more satisfactory, but let us examine the added words of the phrase, "in the morning." "The" is an *adjective*, we know it well. "Morning" a *noun*. But this "in?" We test it. No name; not a noun. Asserts nothing; cannot be a verb. Doesn't fulfill the duty of adjective or adverb. Plainly, we have a new class of word. The teacher informs her class that there *is* a word that introduces a phrase and shows its relation to some other word of the sentence, that it may be they can find out all about it from their grammars; and that they may have until to-morrow to investigate. Was ever a routine, daily lesson studied as this will be? Is not a *Preposition* an established fact ever after to this eager class, who have searched for it, inquired about it, compared notes with each other, and who are shown next day how *in* and *on*, *up* and *down*, perform their duty in the sentence. A step to *Conjunction* and *Interjection* always easily understood. Having learned these our enlarged sentence reads smoothly and satisfactorily.

Now each pupil will present upon the board a sentence containing all the classes of words.

After considerable delay, it is done. Some are very crude indeed, but we do not speak of that. What we *do* observe is that the teacher's sentence, displayed conspicuously upon the board, seems a little awkward. "Ah! the eloquent speaker charmed and instructed the speaker's audience." It illustrates our seven classes of words—and yet—how is this? Why do the class smile? A hand is raised.

"Well, what will you have? Isn't the sentence correct?" "Y-e-s, but—" "Go on." "I should say 'his' audience instead of 'the speaker's audience.'" "Why?" "Well, it would sound better." "Why, again?" "Too much *speaker* about the other." "Very well, then, I think it must be that another class of words is needed. We were to have eight, you know. Let us see what this new word does, what office it performs in the sentence. What word did it take the place of?" and so on, until the *Pronoun* and its uses are well understood. Now ensues a week, perhaps more, of systematic work in word-classifying, "penning words" my pupils call it. Paragraphs are selected from the Reader, and the scholars, for seat-work, are directed to list the words therein under their proper heads, as follows:

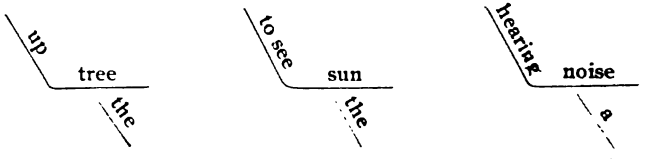
		3			4		
2	5		1				6
Noun	Pro.	Adj.	Verb	Adverb	Prep.	Conj.	Interj.

Again, they bring to the class sentences, and from these the same work is carried on in class, the teacher explaining that the USE of a word decides to what class it belongs. At the conclusion of this class of work, the pupils decide, having been directed to *observe* in this direction, that if we are to number our lists in accord with the *importance* of each class, our scale will run thus: Verbs, 1; Nouns, 2; Adjectives and Adverbs, 3. Prepositions and Conjunctions, 4; Pronouns, 5; Interjections, 6. If asked why *verbs* are given first rank, they are able to reply that a verb may be in itself a sentence, and express a thought. At this point, a girl says she considers the *noun* and *verb* the *father and mother* of the sentence. As to the interjection being of *least* importance all agree, since it can be removed without affecting the sense of the statement. Now follows a written review of *words and their uses*, papers to be carefully examined and marked by the teacher. Here I have never failed to find my class eager for the work.

They feel they understand their subject, and are anxious to convince their teacher of this fact, as well as to compete with their classmates.

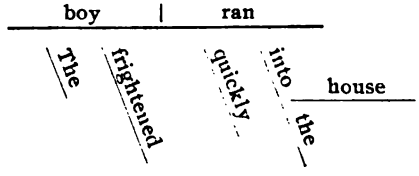
Now we are ready for Phrase-work. We define again; we illustrate. We learn well the meaning of "assert" and "assume," having to know the nature of participle and infinitive, since two of the three kinds of phrases are introduced by them. We learn infinitive and participial *forms* directly from the grammar, from the conjugation of verbs, giving no attention to the other verb-forms. In due time we know the prepositional, the infinitive, the participial phrase, can select either or all of them from given sentences, and then, we make pictures of them, *i. e.*, diagram them. If this is found to be difficult, there are many places in the grammar, suggests their teacher, where each is correctly shown. How willingly they search; and now, knowing how to *picture* our *phrases*, why not put them into sentences? We do so, and gradually discover, by careful observation, that these phrases depend upon other words in the sentence just as surely as do adjectives and adverbs.

How will it be if we signify this in our "picture," or diagram? Our phrases are disposed of thus:



Now comes our first practical lesson in analysis and diagraming. The meaning of the two words *analyze* and *diagram* is to be the first consideration of next day's lesson. "Find them in your grammar" has come to be by this time a familiar direction. To-morrow we all know—in words—that to *analyze* a sentence is to take it to pieces; and that to *diagram* it is to picture the parts. But this is theoretical knowledge. We must make it practical. "Will some one write a sentence containing adjective, adverb and phrase, upon the board?" From those submitted we choose this: *The frightened boy ran quickly into the house.* Now, for the first time, we suggest that we put the most useful words of the sentence upon a line by themselves, and above the others, as befits their rank. We have no difficulty in deciding that *boy* and *ran* are the vital words, and proceed to give them the post of honor. Under them, upon slant lines, as proposed by the teacher, we place our adjective, our adverb and the phrase, in the order they occur in the sentence. This is enjoyable work. All at

the board, work busily, a little puzzled, somewhat amused, entirely interested. When they have finished the best form looks like this:



"See what we have here! Let's sit down and look at them. Can you make any improvement?" Some one who has been seeking phrases in his text-book, and has *observed*, says: "frightened" belongs to "boy." "Certainly, and every one wants his own. We will give 'frightened' to 'boy.'" But how? A dash, and it is done. Another thinks this isn't fair. "Why not?" "Because 'quickly' belongs to 'ran' just as much as 'frightened' does to 'boy.'" "Why not? We will attach it to its master. Now are we satisfied? You are a little hard to please. You seem unsatisfied, still. What is it, John?" "He ran into the house, didn't he?" "Yes." "'Into the house' belongs to 'ran' then." We accept the suggestion, act upon it, and now have the lines all joined.

Now comes a week or more of simple analysis and diagraming. At its close, simple analysis is well understood. Finally, we have the written review of *Phrase-work*.

Not to be too tedious—we must consider the *Clause*. Knowing the phrase well, this is not difficult. We define; we illustrate; we classify as to *use;* as to *meaning;* analyze; diagram; and, lastly, have the written review.

What is left of our four grammatical grand-divisions? Only the sentence. And what do we find? That we have been "expressing our thoughts in words" rather freely, for some weeks. We have only to make sure of the kinds of sentences, as to declaring, asking, commanding, exclaiming, and our special oral work is over.

To sum up, what have we gained by departing from the routine method of direct application to the text-book? Let us see:

First.—We have a large class, the pupils equally advanced.

Second.—They have a settled habit of *observing*.

Third,—They have a clear understanding of language and its natural divisions.

Fourth.—They know the parts of speech thoroughly.

Fifth.—They know well, having *used* them, those two most perplexing verbal forms, the infinitive and participle.

Sixth.—They are at home with phrases and clauses, with simple analysis and diagraming,

Now what is before them? The grammar, book-work—and how easy and familiar it has become. What hears the teacher now?

"Why, we have had this before." "We can take two lessons to-morrow." "Why you were teaching us right out of the grammar all the time' weren't you?"

I have tested thoroughly the oral method of teaching grammar, and have not here exaggerated its happy results.

Observation Lessons.

BY L. W. CUSHMAN, PRIN. WATSONVILLE HIGH SCHOOL.

Whatever makes a boy or girl see, in common things, what was before unnoticed bears the test of all successful work—results. When a lad, I once belonged to a society known as the Open-Eyed Club, or the O. I. C. One of the questions propounded was; "Which way in the apple do the seeds point?" For a long time it was my delight to put this question to older people and set them splitting apples.

A question like that of the apple seeds is not, however, a good one. It is isolated. The aim of observation lessons is the formation of universal ideas or general conceptions, as: all leaves are either pinnate or palmate, weight pulls toward the center of the earth, etc. The discovery, through observation, of a general conception affords infinite satisfaction. To lay these conceptions down beforehand in the form of definitions is to deprive life of much joy. All sorts of questions may be stimulating. But the results will be greater if the observation lessons be limited to some subject or sets of subjects, and continued several years through the grades. A study in the grades of some of the forms and types of one biological subject, and of the fundamental conceptions of matter, will not only be of immediate value to the pupil, but will prepare him for High School work.

An excellent method of learning, not only the forms themselves, as for example, pinnate and palmate, but the fact also that these are the two types of all leaf forms and constitute a real division in nature, is to make extensive collections and lists or albums of leaves. This value of collecting with specific purpose in mind, and of list-making

is too frequently overlooked. An object collected or noted because it represents, or is of a certain *kind*, is worth more than a whole portfolio of curiosities.

In the Watsonville schools we have outlined work in elementary Botany, to extend over six years, beginning with the Third Grade; and in Natural Philosophy, to extend over four years, beginning with the Fifth Grade. The following is an attempt toward developing a knowledge of the general properties of matter and of the mechanical powers.

FIFTH YEAR.

MATTER—Matter is what all things are made of—even the dust under our feet. Can we see and feel it? Is our flesh matter? Collect or note many examples of matter. Does it have color? All sorts of colors? Does it have shape, all sorts of shapes?

Can two pieces of matter occupy the same space at the same time?

Experiment—Fill a basket with apples. Take the apples out. Quarter-fill the basket with peas. Try now to put the apples back. Empty the basket again. Lay in the apples again and as you do so sift in the peas into the spaces among the apples. All of the apples and many peas are in the same basket and the cover goes down. Do the peas and apples fill the space that before was filled by apples only? Or do the peas occupy only the chinks? Could we do this experiment with the peas and canary seeds? (Have a handy boy or two to do the manipulating.)

Take a vessel level full of water. Put in pebbles. What is the result? Is water matter and why?

Take a vessel level full of water. Put in salt or sugar carefully as long as it will dissolve. It does not overflow. The salt disappears. What has become of it? Can we taste it still? Is their any similarity between the experiment with the apples and peas and the water and salt? Is the salt dissolved, i. e. finely divided, and does it fill the chinks amongst the particles of water? Can we always see the chinks or pores in matter?

Does a sponge take up or absorb water? Does a block of wood absorb water? What will happen when the pores or chinks become full? Is water matter? Is it colored? Does it reflect light? Does glass reflect light?

Is the whole earth matter? The stars? The clouds? The Sun and Moon? Why?

Can you find any sort of matter that has no weight? Does a

shadow have weight? Is a shadow matter? Can you put things right into it? Has dust weight? Will it settle? How is weight measured? By scales, weight presses or pulls always in what direction?

Does water have weight? What use is made of the force of falling water?

Why does chaff rise and wheat settle to the bottom when shaken together? Why do the large potatoes or pebbles come to the top? The smaller bodies (wheat and small pebbles) fall through the chinks of the larger. Where are the larger chinks found, between larger or smaller bodies? What causes the pebbles, wheat and potatoes to settle down into the chinks?

Is air matter? Is there any invisible matter? What does the force of air in motion as the wind teach us? Does it shove things aside? Does the air have weight? Take a piece of leather two inches in diameter. Fasten a string in the center. Moisten and press down upon a weight, as a stone. Lift the weight by the string. This is what is commonly called a "sucker," by boys. Why does the leather stick so firmly to the stone?

Why does water rise in the pump? Examine pumps. Make a squirt gun. Why does the water follow up in the barrel of the squirt gun when the piston is drawn back?

Collect a large number of elastic bodies. Wood, glass, iron, steel, rubber, etc. Is air elastic? Example, the pop-gun.

Can we grind up and wear out a piece of matter? What becomes of ice when it melts? Grain grows out of the ground. Where does its matter come from? A man eats the grain. His body grows. The man dies and is buried. What becomes of his body? What becomes of the grain which he ate? Has it been destroyed or is it still in the earth? Can matter be destroyed?

SIXTH YEAR.

LEVERS OF THE FIRST CLASS—Cut small notches in a bar of wood 18 inches long, dividing it into halves, quarters and eighths; also on the other side into thirds and ninths. Make a triangular piece of wood 1 inch high for fulcrum.

Make a number of equal weights—a bar of lead cut into square bits. Fix a little frame on each end of the bar for holding weights.

With the fulcrum in the middle count the number of weights on each end when the lever is balanced.

Place the fulcrum ¼ from the end of the lever. Balance. Count divisions on each side of fulcrum. Count weights. The product of the number of weights on the longer arm multiplied by the number of divisions on that side equals the product of the number of weights on the shorter arm multiplied by the number of divisions on that side. Call one the weight, the other the power. Call one part of the lever the power arm, the other the weight arm. Try many experiments. With a small power what sort of power arm is necessary? Observe levers of the first class—crow-bar, scissors, claw-hammer etc.

What is gained by using this kind of lever? What is lost? In what direction does each, the power and the weight, move? Observe the men at work wherever you find them. What things do they use as levers and how do they use them?

Similarly the levers of the second and third classes are studied. The seventh year is devoted to the wheel and axle, the inclined plane and the screw; the eighth to the wedge and the several combinations of the pulley.

Editor of PACIFIC EDUCATIONAL JOURNAL:

I am not satisfied with the answer to Mr. Drake's problem as given in your last issue. The following problems will show my process of reasoning:

I buy a house for $3000, rent it one year for $300, then sell it for $3000, thereby making 10 per cent. on my investment. So, my investment will continue to net me 10 per cent. were I to keep the house 15 years and sell it for $3000. But keep the house one year, sell it for $2900, then I make $200 on my $3000, or 6⅔ per cent.

Were I to sell the bonds at the end of the first year for $110, I would realize $6 on my investment, or 5 5/11 per cent. If I keep the bonds 15 years and sell them at 110, I realize 5 5/11 per cent. each year. But keep them 15 years, sell at 120, I make $100, or average $6⅔ per year on $110, or 6 2/33 per cent. on my investment.

Just so, if I keep the bonds 15 years, sell them at par ($100), my investment nets me but $80, or $5⅓ per year, or 4 28/33 per cent. Ans.

FRANK A. BUTTS.

Point Arena, Cal., October 25, 1893.

SUPERINTENDENTS, BOARDS OF EDUCATION AND TRUSTEES.

Merits and Faults of Teachers.

A NOVEL EXPEDIENT OF SUPERINTENDENT BROWN, OF HUMBOLDT.

(From "Nerve," October 7th, 1893).

(CONTINUED.)

No. 34.—Pupils not in class recitations "taking it easy." Should have work to keep them employed, and teacher should see that they are at work. Many teachers lose sight of classes not reciting. No good or successful teacher is ever oblivious to what is transpiring in every part of school room.

No. 35.—While class reads, teacher busily employed pronouncing hard words, and even less difficult words. Pupils seemed to expect it, and teacher seemed to think that was what she was there for, and both appeared satisfied. The help was no help, and the habit engendered in both, pernicious.

No. 36.—Highest grade recite first. It seems more "scientific" to commence with the little ones, who are incapable of much study and grow restless when waiting.

Self-reporting in large class in arithmetic. Boy who had done the best in test work given by Superintendent was marked 80, while many others obtained 100 on their own report, but who did nothing in the original work. Noticed that the little fellow hung his head and sulked,—a natural result of injustice.

No. 37.—Three little ones not doing well with addition. Teacher said they got on faster in reading than in "figures." There was the trouble; the teacher was working from the standpoint of figures. When they failed with abstract operations, no attempt was made to illustrate in a concrete way—by objects.

Larger girls recited multiplication table as follows:

3	times	4	are	6
4	"	4	"	8
5	"	4	"	17
6	"	4	"	18
9	"	4	"	38
10	"	4	"	40

Teacher, with surprising equanimity, correcting each error as it was made in a kind, gentle manner, never once intimating to the girl the intense absurdity of such work.

No. 38.—Much interested in reading lesson. Third reader lesson, "Come to the Festal Board To-Night." Teacher read and commented line by line, asking many questions on the thoughts, figures of speech etc. Elicited many crude opinions about the "enchanter's cup," "felon's bed," "a broken heart," "this tells the tale," "the flowing bowl," etc., etc. This takes time, but it's the true way to teach reading. Good order and discipline.

No. 39.—Geography. Question by teacher: "What kind of government has Hayti?" Answer by pupil: "A republican government." Q. "What is a republican government?" A. "A government where they vote the republican ticket."

No. 40.—Grammar grade room noisy; loud study, whispering. Teacher several times commanded young ladies reciting to "sit down." Whacks on desk with stick to quell disturbance.

"Can't you imagine that in your head," viz., have a mental picture of 50–125.

No. 41.—Pupils all around the room during study hours spell out in loud voice without other warning, words they cannot pronounce. Teacher mildly pronounces. This occurs with pupils advanced enough to be sent to dictionary. Pupils should be taught self-help. How to find and appropriate to one's use the information contained in books, is a chief factor in education.

No. 42.—One of the most attractive and well supplied of country schoolhouses. Flag-staff and flag. House newly painted; ceiling and wainscot painted; desks new and clean, and room kept cool by sprinkling. Organ covered. School well disciplined and taught. The only noticeable trouble was that the teacher could not get enough to eat. *A very healthy sign.*

No. 43.—Teacher propounds the whole of a long spelling lesson to each member of the class. Result, remarkable good spellers, but much time consumed.

No. 44.—Arrived in advance of school or teacher. Found fragments of books and numbers of the *School Journal* lying around the school grounds. Some quarter mile from schoolhouse. Five girls came at 9:30. School idle. Wrote to trustees about state of affairs. Never got much satisfaction.

(*Concluded in next No.*)

Institutes.

SHASTA COUNTY.—The Shasta County Institute convened in annual session Monday, Oct. 30th. State Superintendent Anderson was present as Conductor. In his opening address Superintendent Anderson referred to the fact that in these times of business depression there seems to be no lack of money for educational purposes, showing that the masses of the people are interested in these matters and are willing to be taxed for education. County Superintendent Mrs. E. G. Logan read a practical paper to the teachers. Interesting discussions were held on the subjects of "The First Day of a Term of School" and "How to Proceed in Making a Course of Study," "How to call the Roll," and "How the Course of Study is to be Used." Monday afternoon Superintendent Anderson gave practical talks on making reports, school law promotions, morals and manners. In the evening a large audience assembled in Armory Hall, where an interesting program of exercises was given, concluding with an address by Principal Pennell on "Pioneers of Education." Tuesday, Superintendent Anderson talked upon school law, explaining many of its points. Miss Rogers, of the Chico State Normal, entertained and instructed the teachers on the advanced methods of teaching beginners to read, spell and write. Tuesday evening a program of exercises was given in Masonic Hall. Wednesday, Superintendent Anderson introduced the theme for discussion, "What to Teach, How to Teach It and When to Begin." The discussion on "The Evils Resulting from Hasty Promotions" was introduced by Miss Julia Sanderlin. "How shall Various Studies be Taught?" called forth spirited discussions in which many of the teachers participated. At the suggestion of County Superintendent Logan a vote was taken on what subjects should be stricken out of the course of study in Arithmetic. The teachers voted that the following should be stricken out: Alligation, Metric System, Average Payments, Foreign Exchange and Partial Payments, except the U. S. rule. "What is Literature?" "My Aims in the Schoolroom," "Essential Steps in Education," How to make the Schoolroom Attractive," "Conduct of Teachers toward Parents," "Too much Grading" and "How to use District Libraries," were among the other topics that came up for consideration. In conclusion Superintendent Anderson stated that the Midwinter Fair will be a great success, and that the teachers of northern California, should take a deep interest in seeing that this section of the State with its charms of climate and

varied products should be well represented, and that an educational exhibit should be made.

COLUSA COUNTY.—The Colusa County Teachers' Institute, in session during the week ending Friday, the 10th of November, was marked by unusual interest, from the first session on Monday evening when the teachers held a reunion at the residence of County Superintendent, Mrs. H. L. Wilson, to the closing session on Friday. The day sessions were instructive and were well attended, while the evening gatherings called together large audiences of citizens, who were not only entertained but received much instruction on educational questions. Judge Bridgford welcomed the teachers on behalf of the community. Will S. Monroe was Conductor and delivered a number of addresses. Superintendent A. B. Coffey, of Sutter County, was present during Wednesday and gave the teachers some good points on the subject of "Reading." Principal Pennell, of the Chico State Normal, addressed the Institute on Thursday on "Geometry in the Grammar Grades" and Friday on "Education, Old and New." President Jordan delivered an evening lecture on "Spanish Missions." The church was crowded on Wednesday evening to listen to State Superintendent Anderson's lecture on "What Constitutes a Good Teacher." Superintendent Anderson was also present Thursday and addressed the teachers, emphasizing the cost of the institutes to the State and the necessity of improving the time. Superintendent W. M. Finch, of Glenn County, read an interesting paper on "Some Common Mistakes in Teaching." Miss Agnes Stowell was assistant Conductor and presented a number of valuable papers. Many of the teachers of the county took an active part in the proceedings of the institute. Among them were Miss Mattie Lee, J. E. Hayman, J. P. Powell, Miss Emma Von Dorsten, F. A. Bennett, W. B. Smith, A. N. Thompson, F. N. Clevinger, Miss Electa Welch, Mrs. Bayne.

AMADOR COUNTY.—The Amador Teachers' Institute was in session in Jackson from Oct. 31, to Nov. 3, inclusive; teachers were prompt in attendance, and many citizens also attended the various sessions. The services of Prof. Will S. Monroe, as Conductor, were highly appreciated. County Superintendent Mack presided in an able and pleasing manner. Messrs. J. T. Wickes and B. F. Wulff were elected vice-presidents; C. T. Bartlett and Miss Emma Witte, secretaries.

The subject, "What is Reading?" was introduced by B. F. Wulff, who laid special stress upon the first steps in reading. Miss

Myra L. Huie presented the subject of "Phonics" in a very thorough manner showing that the practical application of phonics is necessary both in reading and spelling. Chas. Adams read a paper on bookkeeping. He believes in using some time in preparing pupils to take up the text book. J. S. Clark continued the subject by introducing several entries from the text book adopted by the State. Miss Blanche Roddick conducted a history lesson with the committee on resolutions as her class. "How to Conduct a Recitation," was taken up by J. S. Clark; he illustrated his idea of recitation by considering the Institute a class, and a lively questioning followed. The discussion of the subject of "Primary Geography" was opened by Wm. Moore, and participated in by Messrs. Wickes, Ford, Kerr and Williams. Prof. W. J. Hyde, a man of extensive experience in school work, was introduced and spoke for an hour on general work. "Music as Taught in the Several Grades," was taken up by Miss Hattie Foster, who read a very interesting essay on the subject. Mr. Burnett presented the subject of percentage. He recommended that all definitions be thoroughly learned before actual work is taken up. Miss Emma Tindell read a paper on "Primary Physiology." Several practical experiments were described, and special attention given to the effects of alcohol and narcotics. "Letter Writing and Home Reading" was discussed by H. W. Ford; "Natural History," by G. A. Gordon, who exhibited work of his pupils and explained the manufacture of apparatus used in preparing an herbarium.

Papers were presented on the subject of "Military Drills and Physical Training" by Miss Elsie Robertson, and on "Practical Education" by A. W. Kerr. "Arithmetic" was discussed by C. T. Bartlett, dealing chiefly with the fundamental rules; and E. F. Lippert, on fractions and decimals. Miss Leona S. Bohmen presented the subject of "Language and Grammar," introducing several devices for teaching primary pupils. On the subject of "Spelling," Miss Mamie Gross illustrated a number of devices. "The Beautiful in Education" called forth a number of speakers, the ladies especially taking part in the three minute discussions on this topic.

On the evening of Tuesday the 31st of October, the teachers, in response to invitations issued by the local committee, assembled in Masonic Hall and were entertained for an hour by an excellent literary and musical programme, followed by a pleasant social reunion and banquet.

PLACER COUNTY.—The Placer County Teachers' Institute convened in annual session, Oct. 24th to 27th inclusive, County Superintendent Seavey presiding; C. M. Taylor, Vice-president; A. E. Clark, Miss Agnes Bunker, Secretaries. Superintendent Seavey gave a number of instructive and interesting talks on teachers' reports, grammar, literature and teaching of morals. The discussion on "Essentials of Arithmetic" was introduced by Principal Norris, of Colfax. Principal Reese presented the subject of "Orthography and Word-analysis" Prof. Dryden, of Auburn College, addressed the Institute on the subject of "Inductive Grammar," and President Coleman, of the same institution, discussed "Normal Methods in Arithmetic" in an able manner, illustrating especially the normal methods of teaching fractions and percentage.

Mr. Bankhead introduced the subject of "Examinations," which called forth a prolonged discussion, a vote of the Institute being finally taken and resulting in favor of the present system until a better one could be devised. Principal Shane, of Penryn, read a carefully prepared essay on "Morals and Manners," and Principal Taylor, of Rocklin, delivered an address on "Multiplicity of Studies," dwelling especially on the tendency to burden the public schools with duties that the family, church and society are bound to perform. Principal Cook, of Sheridan, read an entertaining paper on "Essentials of Grammar;" J. S. Hunter discussed "Mental Arithmetic;" Principal Simpson, of Roseville, "Civil Government;" Mrs. Phillips, "Primary Reading;" Miss Skinner, "The Use of Stories in Primary Education;" Mr. Watson, "Current Events;" Mr. Power, "How Shall we Induce Pupils to Study?" A discussion of the subject of "Discipline" was supplemented with an excellent essay by Miss Mattie Dixon. Prof. Griggs, of Stanford, delivered lectures on "The Study and Teaching of Literature," "Lowell" and "Emerson." President Jordan lectured in the Opera house on "Agassiz" and "Ascent of the Matterhorn."

A balance of $7.50 remaining in the treasury of the Institute was forwarded to the pioneer teacher, John C. Pelton.

FRESNO COUNTY.—Oct. 24-26, the regular annual session of the Fresno County Teachers' Institute was held. Nearly all of the 178 teachers of the county were present to hear Superintendent Kirk's able opening address. Miss M. E. Schallenberger was present and won the thoughtful attention of all by her practical ideas and suggestions. She discussed the subjects, "A Plea for the Boys," "Class Exercises in Reading," "Physical Training" and "The Prose and

Poetry of Geography." Pres. C. H. Keyes, of Throop Polytechnic Institute, met with the various sections and delivered interesting addresses on "Principles that Control in Reading in the Beginning," "Mental and Written Arithmetic," "Reading in the Higher Grades" and "Oral Reading." He also delivered an evening lecture on "The New Education." Prof. Barnes, of Stanford, lectured on "Nature Lessons to Precede Geography," "Physical Geography as a Basis for Political Geography," "Early Oral Language Lessons" and Children's Rights as Seen by Themselves.

An address on "The Work of the Schools" was delivered by S. J. Hinds.

Prof. John Dickinson lectured before the Institute on "A Winter in the West Indies," and delivered an evening lecture in the First Baptist Church on "The Changes of Fifty Years."

Very little time of the four days' session was lost in discussions or exercises that were extraneous to the purposes for which it was called. The subjects were all such as to be of use to the teachers, and the instructors handled them in an interesting and beneficial way.

Chrysanthemums.

The bleak, chill winds of November
Blow over the garden beds;
In the bitter and frosty weather
The asters hang their heads.
Where the flame of the salvia brightened
The walks a month ago,
Dead leaves hang black and withered,
Or litter the earth below.

In the first cold night of autumn,
The dahlia's pride was lost;
The hollyhock's splendor vanished
At the coming of the frost.
Even the brave little pansy
Hides under the leaves that fall,
And not one flower of the summer
Answers the robin's call.

But lo! In the corner yonder
There's a gleam of white and gold,—
The gold of a summer's sunshine,
The white of winter's cold.

And, laden with spicy odors,
The autumn breezes come
From the nooks and corners, brightened
By the brave crysanthemum.

Hail to thee! beautiful flower,
With royal and dauntless mien
Facing the frosts of winter,—
I crown thee autumn's queen,
With your gleam of late, sweet sunshine
You brighten the closing year,
And keep us thinking of summer
Till the winter we dread is here.

Brave, beautiful, steadfast flower,
You come with a message to all;
Smile in life's bitterest weather,
And brighten its lonesome fall.
Carry some beauty of summer
In the heart till the season's past,
And let the dread winter that cometh
Find a flower in the soul at last.

—*Eben E. Rexford.*

NORMAL DEPARTMENT.

San Jose Normal School.

EVA V. JOSEPH, - - - - - - - - - - - Editor-in-Chief
MAY ARBOGAST, - - - - - - - - - - Associate Editor
LEROY ARMSTRONG, - - - - - - - - - - Business Manager

November 9th, a small class consisting of Misses Irma Rider, Mabel Houlton, Azelia Winchester, Josephine Devine, Emma Farnham, Vernie Nixon, Sarah Murray, and Eva Joseph was graduated from our school. Although nothing elaborate was attempted, a few flowers tastefully arranged, extra music, and a farewell address by Principal Childs varied the usual morning exercises.

In the afternoon, a well-arranged program was rendered in honor of the "happy nine" by the pupils of the training school, at the close of which each graduate was presented with a beautiful bouquet, a token from their respective classes.

As usual a reception was given in the evening. The Normal parlors were daintily decorated, and an informal program added to the enjoyment of those present. M. A.

On October 27th, 1893, the following resolutions were drafted by the Y. W. C. A. of State Normal of San Jose:

Whereas, our beloved friend and co-worker, Miss Mary A. Gafney, has been suddenly called home by the Master, and

Whereas, we, the members of the Y. W. C. A., realize that we have sustained a great loss in a truly noble woman whose earnest efforts in every field of Christian work, whose patience and perseverance, and whose cheerful disposition have endeared her to all; therefore be it

Resolved, that we tender to the bereaved family this heartfelt testimonial of our deep sympathy and sorrow.

Committee. { ELSIE CAMPBELL, ANNA MUNN, NELLIE KIMBALL, ANNIE WEBB.

There seems to be an impression abroad in our State that graduates of the Normal are content with the culture gained in that institution, and do not care to go on with any higher work. We feel that this impression is erroneous, and to help correct it give below a list of our students who have finished or are taking higher work than the Normal course affords. At State University:—Frank D. Macbeth, Frank May, Mary Mott, Mabel Army, Mariana Bertola, Emily H. Hilton, Elise Wartenweiler, Katherine C. Wambold, Mabel E. Sharp, Mabel Marie Rutherford, Mrs. Francis M. Pugh, Philema Perkins, John Bell Dairs, Miss Marie Cole, Marcellus Dorn, William W. Brown, Nellie M. Haskell, Grace G. Collins, William Herrod, Claude Buchanan Wakefield, R. Lizzie Beggs, Waldo Waterman, Robt. W. Mantz, Ida M. Gibson, Edward E. Thomas, Mary L. W. Curtis, Geo. Henry Boke, Milo S. Baker, Nelson A. Trobridge, Emma Wightman, Mamie L. Calhoun, Bertha Weck, Lou H. Graves, Pearl W. Hall, William H. Langdon.

Methods and Devices.

(*Continued from November Journal*).

QUESTIONS FOR FUTURE OBSERVATION, UPON A SQUASH SEED.

Introduction. Now, children, what is this I have in my hand? (I will give you each six seeds, and I want you to plant them and watch them from day to day so that you may be able to tell me what I am going to ask.) I shall ask for the answer to the first question in about one week.

1. What is it happens to your seed after it is in the ground a few days?
2. Where did the little stem go that pushed out of the seed first?
3. What else came out of the seed?
4. In what direction did the little leaves go?
5. What part of the little leaf came above ground first?
6. What did the leaves do when they were wholly above ground?
7. What became of the outside covering of the seed?
8. After the plant is a few weeks old, what do you see growing between the leaves?
9. What becomes of the first two leaves after the plant is a few weeks old?
10. Make drawings of all I have asked you to observe. Be

ready to answer these questions, besides reporting on all the new things you find out about the squash vine.

Summary at the end of several weeks.

HATTIE A. KENT, Middle A.2

QUESTIONS ON LEAVES.

Introduction. 1. Have you ever walked through a park or garden, and noticed the difference in the shape of the leaves?

2. Why do the leaves turn a different color in fall and finally drop from the tree? (Interest). Let us notice leaves and perhaps sometime we shall learn. (Attention).

OBSERVATION.

My questions are upon the ivy, grape, and elm leaves. (Comparison).

3. Which is the longest of these leaves? (Showing one of each kind.)

4. How many large veins in the ivy leaf? The grape? The elm?

5. Hold a grape leaf up to the light. Of what does it remind you?

6. Are their edges alike? Which reminds you of a saw?

7. What difference do you notice in color?

8. Feel the leaves. What do you observe?

9. Look carefully at the elm leaf. Of what does the under side remind you?

10. In how many ways does the grape leaf differ from the ivy leaf? (Comparison).

OLIVE SWICKARD.

DEVICES.

In the Senior B pedagogy short devices are discussed or others devised for training the child's powers in connection with his ordinary school subjects, this thought of the development of the faculties being emphasized rather than how to get the child over a certain number of pages of arithmetic or grammar, etc. Some of these devices are old friends; others, perhaps, new, at least to the ones who presented them.

TRAINING OF THE SENSES IN CONNECTION WITH OTHER SCHOOL WORK—EYE TRAINING IN LANGUAGE AND DRAWING.

1. Have a series of talks with the class upon objects of interest, beauty or value that they pass daily on their way to school. Let some draw.

2. Unusual objects or occurrences.

3. Show class a leaf, and require each to bring just one of similar form the next day or tell upon what trees or plants they found leaves of that shape; others draw.

4. Show a flower, and ask them to bring something of that color.

5. Place several objects upon a table, chair or desk behind a screen; remove screen, give class a certain number of seconds to observe; disarrange the objects and see who can replace them exactly as they were.

This may be varied by having the class march rapidly behind the screen past the table without pausing, and then arranging similar objects in the same order upon their desks; or let them draw what they saw, representing a pen by a straight line, a book by an oblong, a ball or marble by a circle, etc.

6. The fifth is also good for number work and may be varied indefinitely.

7. Point very quickly at blackboard work in reading, number drills and map drills, removing pointer instantly and then call on the pupil. (Attention and eye).

8. The seventh may be varied thus:

The teacher taking one pointer, gives a child another, and points rapidly, requiring him to match in another place whatever she finds, pronouncing the word, or giving the sum or naming the place as soon as matched.

9. Again this may be varied by letting one child play teacher while another matches.

10. A third or the teacher may call out; two others are to find. Illustration: "Find two numbers that make nine; seven." Or, "Find San Francisco, Stockton, Mt. Shasta." This will require two duplicate maps of course. (Emulation for rapidity and attention).

TRAINING THE EAR.

1. In phonetics, the teacher may give words of command any time in the day when needed, and require children to suit the action to the word.

Teacher articulates distinctly and rather slowly p-ō-s ĭ-sh-ŭ-n. (Children obey. Synthesis).

2. In singing, tap lightly on desk the rhythm of any song lately sung by class; see if they can recognize it.

3. Sometimes let children tap very lightly instead of beating time.

4. In reading, call three or four children to stand in a group; oth-

close eyes. Change the position of children in the group and give each one a different sentence slip to read. Those with the eyes closed tell who reads each. (Attention also.)

5. Vary fourth by letting other children try to imitate each other. (Voice culture).

[*To be continued.*]

Los Angeles Department.

MISS BELL COOPER, - - - - - - - - - - Editor-in-Chief
MR. ROY J. YOUNG, MR. JOSEPH E. BRAND, MISS ORABEL CHILTON, MISS MARY E. HALL, MISS HELEN VINYARD, - - Assistants

It is with a great deal of pleasure that the State Normal School of Los Angeles sends this, its initiatory contribution, to the "PACIFIC EDUCATIONAL JOURNAL." Our school is one of the largest on the coast, there being at present about three hundred and seventy pupils in attendance, and when our handsome new building, about to be erected, is completed, this number will probably be greatly increased; thus we think it but fitting that our institution should maintain a department in this valuable paper.

We take up this work knowing that it may be made of inestimable value to the school, and hoping by means of it to more firmly establish the friendly relations existing between the various educational institutions of the State, to encourage literary efforts, to lay before our readers any simple suggestions, plans, or devices, culled from experiences and based upon educational principles, and to inform the alumni, other students, and the public at large of the work going on among us, and most of all to encourage a line of careful thought along pedagogical lines.

For the present the Senior class has undertaken to maintain this department, the names of the officers elected by the class being published herewith.

NEWS.

The entire school has extended a hearty welcome to our new principal, Prof. Pierce, and his estimable wife. All his plans and suggestion have met with general approval, and we cannot but feel that our relations, both professional and social, have begun most favorably.

The faculty having decided that it would be pleasant for the

school to observe the birthdays of some of the poets, William Cullen Bryant's was the first one recognized. As he was born November 3rd, 1794, the last hour's recitations of Friday, Nov. 3rd, were omitted, the faculty and students gathering in the assembly rooms. The literary and musical program was well received, while the essays showed that Bryant was an able journalist as well as the first great American poet. A few of his best known short poems were read or recited, while a large smilax-wreathed picture of him occupied a promiuent place on the rostrum. At the conclusion of the program, Miss Murphy, a talented elocutionist, gave a few select readings. All were sorry when the last number has been rendered, but we anticipate many more such pleasant and instructive afternoons with the poets.

The Webster Club, composed of the young men of the school, is in a thriving condition. This is shown by the character of its open meeting, given in the Assembly room, one Friday evening last month. A good audience of students and others was present, and frequently manifested its appreciation of the exercises. The feature of the evening was the rendering of scenes from Shakespeare,—the quarrel of Brutus and Cassius, and the court scene of the "Merchant of Venice." This is not the kind of work generally done by such clubs, but the boys believe time spent on Shakespeare to be well spent, and the audience evidently thought likewise.

Vocal and instrumental music, an address, a paper, and a discussion, went to fill out the program. The entertainment closed with a thrilling tableau, "The Hero." A hurry of feet, a buzz of stifled voices, a pull of the curtain, and there in one long *row* stretching across the stage from side to side, sat the jolly Webster Club.

The crowd dispersed with the settled conviction that the Normal boys, tho' few, are yet "a host."

The morning exercises have been somewhat altered by our new principal. Besides the customary hymn, Scripture reading, and chant, we now have a select reading, of four or five minutes length, rendered by one of the Seniors, a second hymn, and then quotations from standard authors by five members of the school. The new order of exercises is liked by everyone.

There are prospects that our excellent five-inch telescope, which has so long lain idle, will soon be again revealing the "wonders of the firmament" to those astronomically inclined.

So far as we can ascertain, all of the nine young men graduated last June, are now teaching. One of them, we understand, is not only doing his school work, but is also preparing to become a college professor. Of the seventy-nine young ladies, we cannot speak so confidently, for their number prevents us from keeping track of them. We would suggest that all graduates write to the principal, and thus to the school, at least once every six months.

The new building we have so long expected is at last to materialize. By the time this has reached the reader, work upon the grounds will have commenced. The building is to be placed adjoining the rear of the present one, the entrance to be made from Fifth street. It is to be a three-story brick structure, 80 x 180 feet, having an assembly-room 80 x 100, two and one-fifth times as large as the one now in use. This new building, in conjunction with our present one, will accommodate 500 Normal students and 450 training school pupils. There will be seventeen class-rooms all told, and twenty-two training-school rooms, besides a physical laboratory, a biological laboratory, library, offices, ante-rooms, etc. The assembly-room, which will seat 800, will probably be provided with opera chairs. Heating and ventilation of the building will be secured by means of hot air controlled by the fan system.

Definite steps have been taken, looking to the publication by the Normal students of a monthly school journal. Its first number will probable be issued for January.

The Normal teachers and the Critic teachers now devote an hour each week to a meeting for the study and discussion of psychology and kindred subjects.

The Normal Literary Society gave a program of unusual interest on the evening of Nov. 10th, it being the last and crowning effort of the out-going program committee. The numbers were a piano solo, quotations from Burns, an essay, an oration, a recitation, a male quartette, and a farce entitled "The only man in town." The last portrayed an evening party at which six young ladies tried to enjoy the company of a single young man, the situations proving as amusing to the audience as to the young man.

EDITORIAL.

TEACHERS desiring to appear in the Educational Souvenir Volume, Midwinter Fair, should not fail to make application to the Educational Publishing Co. before January 15.

QUITE a number of Institute reports were crowded out of this number because an extended notice of the State Association was due and proper. These reports will all appear in the January number.

SUPT. HARR WAGNER, of San Diego, writes that the cut printed in a recent number of the JOURNAL to represent the new Liberty Bell was forwarded by him in mistake, and that in a future issue he will endeavor to present the picture of the genuine new bell.

A MERRY Christmas to the readers of the JOURNAL! With the close of Vol. IX the Editor makes acknowledgment of many courtesies received, and numerous expressions of generous appreciation coming from the superintendents and teachers of the State. May the JOURNAL grow more and more worthy of their cordial support.

A NEW phase of reciprocity has been developed among the county superintendents. Supt. Chipman participated in the Monterey institute; Supt. Wood went to Santa Clara; Linscott, of Santa Cruz, to El Dorado; Mrs. Wilson, of Colusa, to Glenn; Coffey, of Sutter, and Finch, of Glenn, to Colusa, and Kirk, of Fresno, to Madera.

THE second annual session of the Southern California Teacher's Association adjourned December 2nd, after a two days' session in Pasadena. The closing hour was made exceedingly lively by the discussion of the following:

Resolved, That it is the sense of the Southern California teachers that the passage of a bill for the purpose of pensioning teachers would be an unwise action if it is to be based upon the levy of a tax upon the public for such a purpose.

The resolution was adopted. The next meeting of the Association will be held at Coronado. The entire list of officers was reëlected.

THE city of Stockton seems determined to prove herself a generous hostess. Every effort is being made to maintain, at least, and advance, if possible, the high mark of entertainment attained at Fresno a year ago. With transportation facilities surpassed only by San

Francisco and Oakland, with a rich agricultural country all about her, and still maintaining her position as the focus of the great mining and lumber industries of the mountains at whose feet she rests, she stands unchallenged as the future prosperous manufacturing city of our great valleys. That this prophecy is already in process of fulfillment is manifest. Ship and rail and mill and factory contribute to assure her prosperity. Her people, enjoying the present and confident of the future, have both the impulse to hospitality and the means to dispense it.

Her schools take advanced rank. Waterman, Dunbar, Goodell, Barr, Wallace, Pennell, have not labored in vain. Her Boards of Education have aimed at a high standard. Her rapidly increasing roll of teachers, generously remunerated, have kept pace with enlightened and rational methods. With a population of over twenty thousand; with nearly three thousand pupils and more than fifty teachers; with the school department, city and county officials and citizens all uniting in thorough preparation and cordial greeting, this session of the Association should be the largest in attendance, the most harmonious in action, and most effective for good of any yet held.

Emma Marwedel.

On Sunday, Nov. 19, at 2 P. M. in the Unitarian church in Oakland, some two hundred friends and teachers met to mingle their sorrow over the death of Emma Marwedel and take a final look at the kindly face. The services were doubly impressive because of a simplicity fitted to the unobtrusive but devoted life of the departed. In addition to suitable music, brief addresses were made by Rev. C. W. Wendte, Professor Albin Putzker, Earl Barnes and Mrs. Sarah B. Cooper.

The mother kindergartner of the State, Miss Marwedel gave the inspiration that in the work of Kate Douglas Wiggin made Silver St. a golden gateway to squalid childhood; and later, blossomed into the rich florescence of authorship whose key-note is sympathy. Then this inspiration of the dreamer was materialized by the practical spirit of Mrs. Cooper, who has strengthened and extended the kindergarten work of San Francisco until the public has wondered at its scope and influence. The State University and Stanford were both represented in the services. President Kellogg and the venerable Le Conte occupied the front seat. Every department of school work had its repre-

sentatives there, nor were other departments of activity and influence lacking. Among those present best known were Prof. John Dickinson, J. C. Rowell, Albert Kayser, A. B. Nye, F. H. Myers, Superintendent McClymonds, F. B. Ginn, Margaret Schallenberger, and Mollie Conners. The pall bearers were Elmer E. Brown, Earl Barnes, E. W. Hilgard, W. E. Barnard, Capt. Kellner and Joseph L. LeConte. All that was mortal of her rests in beautiful Mountain View Cemetery, Oakland.

Her portrait and an article by one who knew her well will appear in the January JOURNAL.

Prof. John Dickinson, Lecturer, Stanford University.

Rev. John Dickinson was born in Philadelphia in 1835, of Quaker parents. He received his early training in the Friends' School in Philadelphia and the Westtown Boarding School. He first taught in Pennsylvania and Ohio. Coming to California in 1854, he entered the University of the Pacific, where he taught several classes. Later he entered the Methodist ministry and preached for several years in California. He then entered Yale and carried on work in the sciences and modern languages. He afterwards occupied the pulpits of the leading M. E. churches in New York and Brooklyn, but in 1881 was compelled to resign from overwork. After a year's rest in the West Indies, Prof. Dickinson was appointed to the chair of natural science in the University of Southern California. He has spent the past few years in general lecturing in California and Nevada.—*From Palo Alto, Nov. 27.*

IT is with keen pleasure that we record the compliment paid by Stanford University to a man who, in one line at least, stands easily at the head of the instructors to whom the teachers of the State have listened during the past three years. In many respects unlike the lamented Norton, he yet comes nearer filling the long vacant place than any man among us. While he irradiates any subject which it may please him to present, he is especially happy in his chosen theme of biology. Life, scientifically considered, is presented in a manner so interwoven with real human experience, genial humor and kindly sympathy, and so permeated by the reverent spirit that stands uncovered in the presence of the stars, that he soon wins the audience to himself, whether or not they entirely agree with his theory. It is the unmistakable mark of a true teacher to be able to attract attention to and excite an interest in subjects ordinarily considered unattractive or too profound for the common mind. Prof. Dickinson has this gift. With honest purpose and clear vision he follows the lines wherever they may lead, fearing naught, extenuating naught. His science is not of the dry-as-dust sort. It throbs with vitality. The sunlight

ever lies upon it. He sets the atoms to singing and interprets the psalmody of the stars. Such intimacy with science ought to be healthful, hopeful; it need not be uncentered, poleless; it should not lead into a rock-embosomed cavern, where progress or egress are alike impossible.

Such a recognition as this by Stanford, unsought and unexpected, can in no event be called "an empty honor." Yet Prof. Dickinson's friends, while they shower their congratulations, will indulge the hope that the appointment may somehow bring him that satisfactory calm of mind that comes from a future lifted above the harassing hand-to-hand struggle with the real needs of this wondrous relation of spirit to matter, which we call every-day life.

Members of the State Teachers' Association.

The following list of members who have renewed for 1893–94 was forwarded for publication by Secretary Greeley, November 20th:

Bakersfield—Margaret D. Gardett. Bellota—Minnie Lewis. Berkeley—Martin Kellogg, Elmer E. Brown. Chico—Robert F. Pennell, Ellen M. Pennell. Collegeville—Agnes M. Smith. Coronado—Hugh J. Baldwin, Emma E. Meyer. Downey—Mrs. L. Crawford. Escondido—Sadie Dickenson. Fresno—T. J. Kirk, Julia B. Kirk, E. W. Lindsey, Grace Kimball. Lone Star—John Wash. Los Angeles—Juliet Powell Rice, Alice J. Merritt, Melville Dozier. Hanford—Elwood E. Douglass. Madera—Anna M. Nicholson. Mayfield—G. W. A. Luckey, Bertha M. Luckey. Mills College—Josiah Keep. Monrovia—J. H. Strine. Oakland—P. M. Fisher, A. Megahan. Pasadena—James H. Graham. Pomona—May Abbott, Sophia Ayer, Francis Billings, Mrs. E. A. Brink, Florence Cromer, Estelle Endicott, Katherine C. Fall, H. C. Fall, Eunice M. Finch, Mabel Fitzwater, Lillie R. Hill, Julia Laverty, Bessie Mason, Ada Miner, F. A. Molyneaux, Opal McGauhey, Harriet R. Palmer, Ellen M. Parsons, Mrs. S. L. Powers, Ada Quinn, Mattie A. Reed, Jessie Rubottom, Emma Thornton. Sacramento—Hon. J. W. Anderson, Mrs. A. B. Anderson. San Diego—Harr Wagner, Mrs. Laura G. Ridell. San Francisco—Geo. A. Merrill. San Luis Obispo—Dr. Warren B. Brown. Santa Ana—J. P. Greeley. San Jose—R. L. Holway, A. D. Hunter. Santa Maria—H. Clay Faber. Stanford University—David Starr Jordan, Earl Barnes. Tarpey—J. L. Beall. Tulare—Emma Lovejoy, Kate B. Beckwith. Turlock—Maggie Laughlin.

Supt. James Barr, of Stockton, sends the following list:

San Joaquin county—Stockton—Herbert Miller, W. L. Foss, Emma T. Breck, Florilla R. Wickersham, Mary L. H. Arnold, Madge Clayes, Maud A. Southworth, Lola B. Clayes, D. A. Mobley, Alice B. Smallfield, Clara A. Stier, J. Emily Wagner, Josie A. Baxter, S. Lizzie Perry, Julia I. Mann, James S. Moulton, Mrs. Edith D. Moulton, Lottie F. Grunsky, Margaret G. Meehan, Carrie E. Berdine, Mrs. Cora N. Bayley, Florence Dodge, Harriet I. Patterson, P. M. Condit, Lelia E. Al-

drich, Blanche M. Aaron, Ruby Black, Mary A. Gall, Hattie A. Doan, Supt. George Goodell, Supt. James A. Barr, S. A. Kitchener, George C. Turner, H. C. Holman, A. R. Bogne, E. W. S. Woods, R. E. Wilhoit, Mayor W. R. Clark, V. P. Pritchard, Mabel F. Barrows, Anna E. Borchen, Ella B. Chase, Dorothy Vogelsang, Mercedes F. Webster, Willis Lynch, May E. White, Nettie L. Campbell, Ella V. Daly, Jessie M. Stringham, Mrs. Mae Simms, Gus. G. Grant, Florilla Campbell, Emma Snapp, B. Dena Lottman, Harriet M. Keating, Emma Badgley, Lætitia Summerville, Marion Adams, Mrs. H. C. Holman, Maretta Badgley, Martha M. Turner, Susan R. Patterson, May E. McDougald, Annie Powell, Louise C. Ashley, Anita Leadbetter, Flora Leadbetter, Sadie Summerville, Lizzie Doan, Addie I. Tangeman, Daisy Sharp. Eliot—W. H. Matheson. Ripon—Ella Sinder. Farmington—Belle Mitchell. Lockeford—Ellen Korell—75.

The State History Again.

On page 283, line 5, of the State History one edition reads "the abolition of slavery;" another, "the continuance of slavery." Since the publication of a letter on this subject in the November JOURNAL, the editor has received a number of communications on the same point which he forwarded to Sacramento, and received the letter which follows:

SACRAMENTO, CAL., Nov. 25, 1893.

Mr. P. M. Fisher.

MY DEAR SIR: On page 283 of the State History of the United States, line 5, "continuance" was the word originally employed instead of "abolition." The change was made in 1889. Even in that form the statement is inaccurate to the extent of using the word "slavery" for the phrase "the slave trade."

W. H. V. RAYMOND,
Editor in Chief of the State Text Books.

And the following from the compiler of the State History:

OAKLAND, CAL., Nov. 25, 1893.

Editor PACIFIC EDUCATIONAL JOURNAL:

I read the query of E. N. Mabrey, of Nord, Butte county, with some surprise, but your answer to the same with consternation, (page 469, November JOURNAL). I find that Mr. Mabrey's quotation is exact as regards the State History, first edition; and have no doubts as to the accuracy of his quotation from Barnes. Mr. Mabrey should have seen, however, that his two quotations are in nowise contradictory. The fact is that both the resolution presented in the Senate by Mr. Clay, January 29, 1850, and the so-called Omnibus Bill reported by a select committee of thirteen, Mr. Clay, chairman, on May 8, 1850, contained the provisions that slavery should not be abolished in the District of Columbia, but that the *slave trade* therein (*i. e.* the buying and selling of slaves) should be prohibited.

If, however, as your answer suggests, some *later* edition of the State History has volunteered the information that Clay was ready to turn Abolitionist to the extent of extinguishing slavery in the District of Columbia, it is simply a gross and inexcusable error.

F. H. CLARK.

The State Association.

The Stockton meeting of the State Teachers' Association will undoubtedly be one of the most successful in its history on account of the excellence of the program prepared, the central location of the convention city and the enthusiasm of the San Joaquin teachers.

The County Institute of San Joaquin County has been called by County Superintendent Goodell to meet on Tuesday, Dec. 26, at 2 P. M. After organizing, it will adjourn to meet with the State Association. The State Board of Education will meet at Stockton Dec. 27 or 28. The Council of Education will meet Dec. 26. The Association will organize at the New Yosemite Theatre on the evening of Dec. 26. Addresses of welcome will be given by Mayor W. R. Clark, Superintendent Goodell and Frank D. Nicol, and responses made by President Kirk, State Superintendent Anderson and Superintendent Swett of San Francisco, after which President Kirk will deliver his annual address.

On Wednesday, Thursday and Friday forenoons, the Primary and Grammar school department will meet in the New Yosemite Theatre. The general afternoon sessions will be held at the same place. The Normal and High school department will meet in New Pioneer Hall on the forenoon of the days mentioned. The Department of Supervision will meet in the Court Room of Department 2 on Wednesday and Thursday forenoons; the Department of Music, in the Court Room of Department 1, on Wednesday forenoon.

On Wednesday evening a reception will be tendered the Association by the teachers and citizens of Stockton and San Joaquin County, at Music Hall, Masonic Temple, at which Governor Markham and other notables will be present.

Hon. Henry E. Highton of San Francisco will deliver a lecture on "American Education in Relation to the Twentieth Century" on Thursday evening.

A strong local executive committee consisting of City Superintendent James A. Barr, County Superintendent Geo. Goodell, Mayor W. R. Clark, Supervisor Otto Grunsky, Councilman H. W. Taylor, S. A. Kitchener and R. E. Wilhoit, President and ex-President of the Board of Education, and Principals Herbert Miller and D. A. Mobley, has charge of all arrangements, and judging from the vim with which the Stockton teachers came to Fresno 110 strong last year, the association may expect to be royally entertained.

As Stockton is so easy of access both by water and by rail a large attendance is assured. Owing to the sharp competition between the two lines of steamers plying between Stockton and San Francisco, the fare between those two points has been reduced to twenty-five cents. Many teachers will undoubtedly take advantage of this low fare to attend the Stockton meeting. The steamers leave Clay and Washington street wharves, San Francisco, every evening, Sundays excepted, at 5 P. M.



Fremont School, Stockton, Columbus Day, 1892.

TRANSPORTATION CONCESSIONS.—Liberal concessions have been granted by the Southern Pacific Company. All persons desiring to attend the meetings of the Association should procure certificates granting holders reduced rates. These certificates may be obtained from all city or county superintendents or by applying (enclosing stamp) to J. P. Greely, Santa Ana. Attendants will pay full fare from starting point to Stockton, at the same time securing ticket agent's signature to the certificate mentioned.

These certificates after being countersigned at Stockton by Sec. Greely will entitle the holders to return tickets at one-third the usual rates.

As the Midwinter Fair opens in San Francisco on Jan. 1, or two days after the close of the convention, it is certain that many teachers will take advantage of the opportunity offered of attending both the Association meeting and the Fair at reduced rates.

MIDWINTER FAIR.—Arrangements have been made with the transportation companies whereby all persons attending the Association will have ten days after the close of the meeting in which to visit the Midwinter Fair at San Francisco. Attendants desiring to do this will read the following carefully:

From points south of Lathrop—Purchase six months local ticket to Stockton.

From points north and east of Sacramento—Purchase six months local ticket to San Francisco, instead of Stockton, and take agent's receipt therefor.

From points between Davisville and Tehama via Woodland—Purchase six months ticket to Stockton via Sacramento.

BEFORE YOU LEAVE STOCKTON THE SECRETARY OF THE ASSOCIATION WILL GIVE YOU FURTHER INSTRUCTIONS.

Teachers coming to San Francisco on the boats of the P. C. S. Co. may purchase return tickets up to Jan. 31 at half-rate, on presentation of certificates properly endorsed.

HOTELS.—Hotel accommodations may be secured for from $1.00 to $2.00 per day, all hotels having agreed to reduce rates. Teachers desiring hotel accommodations should address the local committee at once, stating just when they will arrive in Stockton and about what kind of room is desired.

The headquarters of the Executive committee and of the Stockton teachers will be in the parlors of the Yosemite House where all visiting teachers will be welcome.

Teachers on reaching Stockton, after being assigned to rooms, should at once call on the Secretary at the Yosemite House, present or procure certificates of membership, and receive the Association badge which will entitle the holder to all privileges accorded members durthe sessions.

SOMEBODY referred two arguments on metaphysics to a German and asked him what he thought. He replied, "I think so neither."

Official Department

DECEMBER, 1893.

J. W. ANDERSON, - - - - - - Superintendent of Public Instruction
A. B. ANDERSON, - - - - Deputy Superintendent of Public Instruction

SACRAMENTO, Nov. 29, 1893.

P. M. FISHER, ESQ.,
San Francisco, Calif.

DEAR SIR:—Replying to yours of the 28th inst. concerning "official" matter, I would state that Superintendent Anderson is attending Institutes at Riverside and San Bernardino.

Respectfully,
M. P. STONE, *Deputy.*

CALIFORNIA SCHOOL ITEMS.

TULARE county has a sixteen-year-old public school pupil who weighs 280 lbs.

THE Fresno teachers have organized an association for the discussion of important educational topics.

THE Harris district school-house, in Alameda county, was blown down during the heavy gale in November.

PROF. S. W. BURNHAM, formerly of the Lick Observatory, has been appointed Professor of Practical Astronomy in the University of Chicago.

A CONTRACT has been let for the construction of a new public school building in Monterey, to take the place of the fine building destroyed by fire.

PETITIONS will be presented to the Supervisors of Merced county at their January meeting, for the formation of three new school districts, all of them being on what is known as the West Side.

THE Board of Supervisors of Shasta county has appointed Mrs. D. M. Cole-

man, the pioneer teacher, to the vacancy caused by the resignation of S. N Witherow from the Board of Education.

THE Supervisors of Plumas county have instructed the District Attorney to proceed against the bondsmen of Ex-County Supt. Foss for the recovery of the amount of his embezzlement of certain school funds.

PROF. MOSES, of the State University, will introduce a new study next term, "History and Institutions of the Spanish-American Peoples." This is the first attempt of any college to pursue a scientific investigation of the political organization of the South American countries.

MISS JOSIE J. REGAN, vice-principal of the Sutter Grammar School, Sacramento, died recently in Paris, whither she had gone to recuperate her precarious health. Miss Regan was a progressive and thorough teacher, and had been for nine years past a member of the County Board of Education, serving last year as president.

SECRETARY CARLISLE has decided to throw open to young men in civil life the examinations for cadetships in the revenue cutter service. Heretofore the officers for this service were secured from the naval academy. If there is a sufficient number of applicants from this coast, an examining board will be appointed in San Francisco.

PRINCIPAL F. L. BURK, of Santa Rosa, has made some important departures in the system and methods of the schools under his supervision. In a general way, three principles or aims have been the motive springs in the changes made. 1. The development and encouragement of the teacher's individuality of method, curbed only by unity of principles. 2. The organization of the departments for work, both in the matter of pupils and teachers, upon a basis of natural interest as opposed to the task system. 3. The reorganization of the department throughout upon the inductive method of education, by which the attention is largely directed upon the process by which facts are obtained as well as upon the simple accumulation of facts. Some radical modifications relative to the promotion of pupils have also been made.

ON the subject of tinkering courses of study, Supt. Armstrong, of San Luis Obispo, makes the following pertinent remarks: "Some of our State Normal teachers are urging that elementary geometry should be added to the course of study in the lower grades of our schools. We don't believe a word of it. Our course is already overcrowded, and the problem to be solved is not what shall be added, but what may be dropped out. While it is true that some knowledge of the elements of geometry is essential to a proper understanding of arithmetic, it is also true that they are taught under the present system, though under another name perhaps; and if any more is needed let some of the technical and non-essential things in our State Arithmetic be omitted and some of the essential features of elementary geometry be incorporated at the proper place. We know something of the difficulties attending the efforts of county boards in the direction of framing a course of study and adjusting it to the majority of our public schools. The present course, although the result of many years of observation and patient effort, is not perfect, but can and will be improved upon. But it must be done by lopping off some thing that can be spared whenever anything better presents itself and establishes its claim to a place in our curriculum. Let there be no addition of separate branches with new text-books."

OUR LIBRARY TABLE.

THE PUBLIC SCHOOL SYSTEM OF THE UNITED STATES. By Dr. J. M. Rice. 12mo, 308 pages, cloth, $1.50 The author of this book was deputed by the editor of *The Forum* to visit the public schools of thirty-six of the principal cities in the United States, and to examine and report on the public-school system. The result was a series of articles of great value, which attracted wide attention when published in *The Forum*. They were the subject of leading editorials in most of the principal newspapers of the country. Dr. Rice tells some remarkable stories of the system in vogue in some cities which were supposed to rank very high in the matter of public schools, while he shows that some Western cities, about whose public-school system little is known in the East, have much to commend them to attention. The book is full of suggestions, and should be read by every teacher and every person interested in the subject of education. Published by Chas. Scribner's Sons, N. Y.

E. L. KELLOGG & Co. of New York and Chicago publish this fall the following valuable list of books on teaching: "Parker's Talks on Pedagogy." The very popular lectures delivered at Chautauqua by Col. Parker have been revised and much extended by him. The book promises to be the most valuable the author has written. "Great Nations of the World." Indispensable in teaching Geography, History and Current Events. Finely illustrated with portraits of the rulers of the chief countries of the world. 50 cents. "Rousseau" and "Horace Mann." Are too more volumes of the Great Educator series. 15 cents each. "The Contents of Children's Minds." By G. Stanley Hall, Pres. Clark University, is another educational classic. It is the result of experiments to learn what the average child knows on entering school. Very suggestive. 15 cents. "Normal Lessons in Temperance Physiology. By Mrs. Mary M. Hunt, of the W. C. T. U. Gives to teachers the materials with which to do intelligently the work required by the temperance education laws. This is an important and much needed book. "Lang's Great Teachers of Four Centuries." (Illus.) Gives in brief the ideas of Comenius, Pestalozzi, Frœbel, Mann, etc., and their effect on the teaching of the present. 25c. "Lang's Herbart and His Outlines of the Science of Education." 25 cents. "Rein's Outlines of Pedagogics." Prof. Rein is well known to our teachers who go abroad to study, and his book is probably the best exposition of the Herbartian principles of education. Cloth. Price, 75c.

A GOOD book of supplementary reading for the wee folks is "Nature Myths and Stories for Little Children," by Flora J. Cooke, of the Cook County, Ill., Normal School. Myths and fables are usually only truth clothed with imagination, and the dress is almost always beautiful and simple. Who can study these myths and not feel that nature has a new language for him, and that, though the tales may be thousands of years old, they are quite as true as they were in the days of Homer. If the trees and the flowers, the clouds and the wind, all tell wonderful stories to the child he has sources of happiness of which no power can deprive him. This little work contains 92 pages. Price, 15 cents. Low rates will be made for class use. A. Flanagan, 262 Wabash Avenue, Chicago.

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